

TOWN OF SCITUATE
WATERWAYS ≈ MANAGEMENT ≈ PLAN



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Scituate, Massachusetts 02066

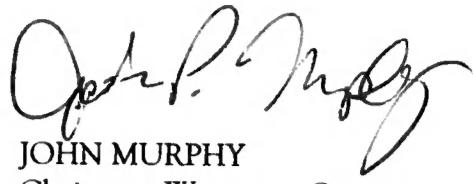




The Waterways Commission would like to acknowledge all those whose efforts are reflected in the pages of this document. Many Scituate residents, Board and Commission members participated in the November 18, 2009 vision-planning meeting that preceded the start of the Waterways Management Plan and contributed to its successful completion.

I personally want to extend my thanks and appreciation to Waterways Commission member Geoff Gaughan, Harbormaster Mark Patterson and Jason Burtner of Coastal Zone Management for their guidance and input throughout this process.

Because of the commitment of all those involved we now have a road map to the future of our beautiful harbor.



JOHN MURPHY
Chairman, Waterways Commission

SCITUATE WATERWAYS MANAGEMENT PLAN

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I. Summary of the Scituate Waterways Plan

A. Overview

1. A Plan for the Future of Scituate Waterways

The waterways of Scituate, including Scituate Harbor and the North and South Rivers, are among the most active waterways on the South Shore. The historic and scenic harbor is the major harbor in the region, home to approximately 1,400 commercial and recreational vessels. The North and South Rivers also provide recreational and commercial opportunities and are one of the great scenic treasures of the region. These beautiful rivers, once the cradle of a young America's merchant fleet: have returned natural habitat for spawning winter flounder, alewives, shad and smelt; support seasonal fish migrations; and serve as an active sports fishery. These waterways and the history, future, and identity of Scituate are forever mingled.

Scituate Harbor is, and will continue to be, the most important natural asset of the Town. Scituate Harbor is conveniently located in the middle of Massachusetts Bay between the primary northern ports (Boston, Marblehead, Gloucester) and those to the south (Plymouth, Provincetown), as well as the Cape Cod Canal. The important fishing grounds of Stellwagen Bank lie directly to the east in the Atlantic Ocean, thus making Scituate Harbor its nearest mainland port. For these principal reasons, Scituate Harbor is considered as an important harbor of refuge for both pleasure craft and the fishing industry.

Scituate Harbor is an attractive focus of activity for the entire community which surrounds it. The Harbor area is a complex place that requires public attention to ensure appropriate use and a clean environment. The Scituate Waterways Management Plan (the "Waterways Plan" or "the Waterways Plan") establishes practical steps to meet these goals. This Plan values the present character and activities within the Harbor area. Rather than seeking dramatic changes, the objective of the Waterways Plan is to enhance the Harbor through better management and by accomplishing a list of coordinated improvements.

The Plan envisions a future Scituate Harbor with greater access and a more pleasant character along the waterfront for all of its users. The Plan calls for many small scale improvements, each planned and designed with respect for the special qualities of its particular circumstances and the uses which will be served. Improvements will be achieved in part by ongoing maintenance and enhancements to all town landings and public access points.

In addition, the Waterways Plan includes improvements to the public wharves, bulkheads, boat ramps and support infrastructure for commercial and recreational boating through reconstruction and improvements. Both short-term and long-term actions will continuously add to the safety and amenity of a harbor for all sizes and types of vessels. Among the specific recommendations are:

- Maintenance of Scituate Town Pier to correct deterioration and structural deficiencies and better serve both current and future uses.
- Continued operation of Scituate Marine Park as a working boatyard, serving commercial and recreational needs of both long-term and transient boaters.

- Development of Scituate Maritime Center as maritime cultural center of the Town, bringing together historic buildings, maritime educational and recreational programs, and traditional and contemporary marine trades.
- Improvements to the existing boat ramps.
- Use of existing land use procedures to protect water-dependent uses, and the investigation of additional measures to help ensure appropriate uses along the waterfront.
- Support improvements that expand the utilization of Town owned or privately owned facilities.

Specific recommendations of the Waterways Plan include:

- Adherence to a comprehensive ongoing dredging plan for the Harbor and North and South Rivers, including development of funding plans and obtaining permits and clearances.
- Adherence to an ongoing business management approach for Scituate Harbor to provide for comprehensive management oversight of Town controlled or owned assets in the Harbor, specifically to protect and enhance the value of Town assets, to identify and actively seek funding sources for waterways projects, and to provide management oversight over ongoing and occasional projects and initiatives.

2. Planning Context

Scituate Harbor is a unique asset for the community, the region, and the Commonwealth. Located south of Boston in the heart of Massachusetts Bay, the harbor provides a protected natural anchorage and picturesque setting that has attracted settlers, fishermen, tourists and residents for hundreds of years. Like other harbors, it has mirrored a changing economy. Once principally a fishing harbor, the harbor edge was historically lined with numerous piers and wharves. Front Street along the harbor's edge served a vital marine-oriented economy and its related culture. While it still serves a vital role as a marine harbor, the business of the harbor is now largely related to recreational boating, which is the predominant economic activity for Scituate and Cape Cod.

This Management Plan for Scituate Waterways establishes a reasoned approach to the future use and management of Scituate Harbor and its waterways. Scituate contains approximately 21 square miles of waterways, including five principal beaches (Egypt, Humarock, Minot, Peggotty, and Sand Hills), four rivers (North River, South River, Herring River and Gulf River), and a large sheltered harbor.

The Plan has been prepared by the Town of Scituate to address numerous existing issues and to establish consensus about the character and quality of the harbor. The Plan has been prepared in concert with the requirements for a Municipal Harbor Plan as recognized by the Commonwealth of Massachusetts Office of Coastal Zone Management, to establish a consistent regulatory approach to those lands and waters subject to Commonwealth jurisdiction. The Commonwealth retains specific interests in the future of the harbor for public access and water-dependent uses through

M.G.L. Chapter 91 (Public Waterways Act, 1866), and through the implementing regulations (310 CMR 9.00).

The Plan more particularly responds to a specific list of issues raised in a participatory planning process as incorporated into a Scope for the Scituate Waterways Plan. The Scope of the Waterways Management Plan was prepared by the Waterways Planning Sub-Committee, the group designated by the Scituate Waterways Commission to create this Plan.

Five key issue areas have been addressed in this Plan, and are reflected in its recommendations:

- Preserving the Harbor's Built and Natural Assets;
- Promoting Commercial Fishing and Aquaculture;
- Providing for Diverse Vessel Use and Needs;
- Assuring Public Access to the Shoreline for Recreation; and
- Planning for Future Harbor Uses.

3. Organization of the Scituate Waterways Plan

The elements of the Scituate Waterways Plan have been organized to facilitate review and reference. This initial section of the Waterways Plan presents the fundamental goals and objectives of the plan and summarizes the principal recommendations regarding its future. Section II summarizes the planning process that has been employed to come to the conclusions contained in the Waterways Plan. Section III is a synopsis of the research concerning existing conditions that serve as the foundation for understanding the issues that are addressed by the Waterways Plan. Section IV recounts a key step in the planning process, during which potential alternative planning directions were studied and from which the conclusions emerged.

Section V incorporates the specific recommendations of this Plan. The recommendations have been organized somewhat differently than the original list of issues, to facilitate comprehensiveness and understanding of the conclusion. The recommendations trace the implications of the Waterways Plan for:

- Land Use
- Water Use
- Public Facilities
- Regulatory Framework for Chapter 91
- Long Term Plans

Section V concludes with Summary of Recommended Actions; this is a list of prioritized actions that are intended for specific public actions and expenditures.

Section VI is the Implementation Framework for the Waterways Plan. Rather than discussing what

the Waterways Plan should accomplish, it describes recommendations on how the Waterways Plan should be accomplished. The implementation framework is summarized at the end of the section through a matrix that assigns responsibilities for each of the recommendations.

4. Limits of the Waterways Planning Area

The planning area used for this Waterways Plan includes all of the land and uses immediately adjacent to the harbor within the town limits, between the Town of Cohasset to the north and the Town of Marshfield to the south (see Appendix E. Planning Area Map). The Plan also includes the waters and waterfront of the North and South Rivers within Scituate's jurisdiction, up to the North River's border with the Town of Norwell to the west, and the South River's border with the Town of Marshfield to the east.

5. Summary of the Waterways Planning Process

The Scituate Waterways Plan has been prepared under the guidance of the Scituate Waterways Commission.

B. Planning Framework: Overall Goals and Objectives

The Scituate Waterways Plan is based on a series of general goals and specific objectives. These goals and objectives are intended to inform every element of the Waterways Plan and to reinforce a coherent vision of the future of Scituate Harbor. The goals and objectives are based on the results of public meetings, discussions, surveys, reports and recommendations that were developed over many years, and for which the Harbor Planning process has served as the focus.

1. Goals

Scituate Harbor and the North and South Rivers should consistently be recognized as a unique public asset for which change should be carefully planned and implemented to protect both its environmental and economic role.

- Decisions concerning use of the harbor and its edges and the Rivers should seek to achieve a balance, allowing for multiple uses and seeking compatible relationships among them.
- Marine-dependent uses should generally have priority over other uses for land use and water use.
- Scituate Harbor and the North and South Rivers are a scenic resource and activity center for tourism and recreation; this role should be protected and enhanced.
- The environmental quality of Scituate Harbor and the Rivers should be managed, monitored, and maintained to thoroughly protect its role as a natural and clean asset.
- Public access to and along the water's edge should be consistently protected and enhanced.

- Scituate should strive to improve existing deficiencies in the harbor for all existing uses, without seeking to significantly shift the balance of uses in the short term.
- Responsibilities should be clearly identified to improve both the effective management of public facilities and the interests in the harbor.

2. Objectives

- The pattern of development along the Scituate waterfront is generally appropriate and desirable in terms of density, use, and scale. However, increased provision for both access to the waterfront and access along the water's edge should be reinforced wherever practical.
- Land use impacts on water quality in the harbor should be minimized through correction of existing stormwater discharges and the appropriate provisions in any future developments or improvements. In locations outside the Harbor, such as the North, South, and Gulph Rivers, older septic systems that do not comply with Title V should be upgraded where sewer is not available.
- Harbor and Town beaches should be maintained to reduce trash and detritus.
- Facilities and support for the commercial fishery should be retained and enhanced through programs and facilities that can be adapted to changing needs of the industry.
- The needs of the small boat fishermen should be better accommodated in Scituate Harbor.
- Scituate Harbor and the North and South Rivers should have improved access for trailered boats.
- Opportunities for increased aquaculture should be pursued insofar as they do not significantly interfere with existing patterns of use.
- Support facilities, mooring and berthing opportunities, and boat ramp facilities should be enhanced for recreational boaters.
- A pro-active and planned program for maintenance dredging should be implemented.
- Scituate Town Pier should be improved to correct existing deficiencies and to serve future uses.
- Scituate Marine Park should be managed to serve as the multiple-use hub for commercial and recreational boatyard activities
- Scituate Marine Park and Maritime Center should encourage people of all ages, abilities and economic levels to participate in activities on or near the water.

- Town landings and publicly owned land along the waterfront should be improved to provide better access and to accommodate increased public use appropriate to each location.
- Additional public access and amenities should be provided or improved in areas in which they are scarce, including the enhancement of the Driftway Park facilities on the Herring River.
- The management of the Town's principal waterfront assets (Scituate Town Pier, Cole Parkway Marina, Scituate Marine Park, the mooring fields, and Driftway Park) should be self-supporting to the greatest extent practical.
- An economic development plan should be employed to analyze and predict the impact of commercial activity.
- Scituate should establish an ongoing program to improve its water dependent recreational opportunities for citizens of all ages and abilities, including supporting and developing the Scituate Sailing Program and similar programs.
- Scituate should establish a long-term goal of improving its facilities as a boating and cruising destination, by substantially improving the moorage and berthing potential for small boats through a comprehensive approach to breakwater and dredging improvements.
- Waterfront open space and conservation should be preserved to the fullest extent available when not conflicting with water dependent uses.

C. Summary of Principal Conclusions and Recommendations

1. Land Use

Land Use Patterns and Regulations

Summary of Key Land Use Actions

- Incorporate Waterways Plan recommendations into special permit, variance, and similar reviews, including protection of water-dependent uses.
- Amend the zoning regulations regarding uses that support water-dependent uses.
- Continue grants and similar programs to protect properties in the FEMA velocity zones. Investigate impacts of future sea level rise on town infrastructure and private properties. Develop long range plan for maintenance of infrastructure and seek sources of funds for repair and replacement, where appropriate.
- Provide for continuation of water quality monitoring program. Enforce town storm water bylaw and strongly adhere to the comprehensive storm water management plan.

- Further enhance the existing Harborwalk section surrounding the Harbormaster's Office, continuing along the water to the roadway at the Mill Wharf Marina to continue north along the water.
- Continue the completed pocket park section of the Harborwalk at the west side of Cole Parkway Boat Ramp to continue to the entrance area of Cole Parkway and ultimately connecting the Driftway bike path and Harborwalk to the Scituate Marine Park, , including development of boardwalk portion of Harborwalk, with required 25 feet of green space.
- Investigate expansion of green space at Gazebo and along the waterfront in Cole Parkway to create an attractive and multi-functional public space on the water's edge.
- Explore new configurations of Cole Parkway to add or enhance public access, improve the overall appearance of this large public parking area and create additional parking if feasible.
- Add interpretive signage, bike racks and landscaping of the Harborwalk areas to develop and create a visually inviting and easily accessible public space to the waterfront for the boating and non-boating public.
- Further study the Harborwalk extension possibilities to the Lighthouse/Cedar Point area ("Lighthouse Route") and to the Scituate Marine Park/NOAA Stellewagon Bank Sanctuary ("First Cliff Route").
- Enhance the removal of beach debris by providing additional assignment of maintenance responsibility and funding to the DPW and by providing additional trash receptacles.
- Enhance the removal of beach debris by increasing volunteer activities and increasing public awareness.
- Include conditions on the removal of beach debris in relevant permitting and licensing criteria.

In keeping with an overall goal of the Waterways Plan, there are several recommendations concerning the importance of water-dependent uses. This Waterways Plan recognizes that water-dependent uses should have reasonable priority for use of the water's edge as a matter of policy and public right. In part, this is a result of the Commonwealth's public use standards for qualifying land areas, which have been codified in the regulations known as Chapter 91. It is also in the best interest of Scituate to support water-dependent uses for reasons of economics and the historical character of the community.

Most of the land use recommendations of the Waterways Plan are related to the implementation of a program to provide improved conformance with the Chapter 91 protections for water-dependent uses and public access to the waterfront. These recommendations are discussed at greater length in a separate discussion below.

The Plan includes proposed improvements to publicly-owned lands that would increase their potential for accommodating water-dependent uses. These recommendations have been summarized in the discussion of Public Facilities.

During the planning process, a review of existing zoning was undertaken. Current zoning includes provision for water-dependent uses through a Harbor Business District that applies to key portions of the central waterfront in which water-dependent uses might be reasonably located. In general, it was concluded that the regulations serve to protect the potential for water-dependent uses. However, the regulation should be revised to accommodate some uses that, although not water-dependent, serve to support water-dependent uses. In particular, facilities that support commercial or recreational boating industry without detracting from the character of the existing small retail businesses need to be better accommodated in existing zoning.

The Town Master Plan recommends the Town should adopt a Coastal Preservation Overlay District for Scituate Harbor and the surrounding area from Cedar Point to First Cliff, and other coastal areas. This District would include height controls on residential and commercial development, and limits on building setbacks, lot coverage and/or floor area ratio to prevent overbuilding. A reasonable height restriction in this district that buildings could be no higher than 30 feet should be further investigated.

As stated in the 2004 Town Master Plan: “Access to the coast for all residents should be enhanced so that Scituate residents and visitors alike can take advantage of this scenic resource. This can be changed with implementation of pedestrian improvements and development of attractive, easily accessed public spaces. Require full pedestrian and bicycle access: contiguous sidewalks, pedestrian crossings, convenient and secure bicycle parking.

“Specifically, create a contiguous sidewalk network, frequent crosswalks, secure bicycle parking, and more traffic calming to slow vehicle speeds and enhance safety for non-automotive users.”

“In 2000, the Planning Board obtained a grant from CZM to investigate how to better physically and visually connect Front Street and the waterfront in Scituate Harbor. The resulting Scituate Harbor Access Study by the Urban Harbors Institute recommended creation of a walkway including three sections, the Scituate Harborwalk, the First Cliff Route and the Lighthouse Route. This study emphasized the importance of building community support for any walkway to ensure its successful creation.”

Environmental Impacts of Land Use

The Plan reinforces the existing town policies towards protection of the harbor as an environmentally sensitive location. The Waterways Plan recognizes the importance of the current program to correct water pollution problems due to stormwater outfalls in Scituate and older subsurface sewage systems which affect many of the Town’s coastal waters. The Waterways Plan

recommends proactive involvement of the town in programs to monitor water quality and to pursue corrective measures to ensure high water quality.

Stormwater Management

In 2009, Scituate passed a town bylaw regulating storm water management. Stormwater is a known source of contamination to coastal water bodies, and this Waterways Plan supports continued use and enforcement of this local bylaw.

Harbor Beaches

The Plan calls for increased access and amenities for the public as well as useful marine-related improvements along several areas of the beach. The Plan recognizes that different beach areas have different uses. Specific recommendations for access and amenities are included in the sections of the report dealing with Town Landings and Commonwealth Tidelands.

The Plan also identifies regions where beach erosion presents a problem and suggests preliminary steps to prepare for future beach nourishment in these and other areas. It further calls for an increased maintenance program to remove trash and detritus from the harbor's edge.

Scituate Harborwalk

The Plan recommends further enhancement of the existing Harborwalk section surrounding the Harbormaster's Office, continuing along the water to the roadway at the Mill Wharf Marina to continue north along the water. Also recommended is further continuation of the Harborwalk, ultimately connecting to the Driftway bike path to the Scituate Marine Park, thereby linking areas of commercial, recreational and historical significance.

Interpretive signage, bike racks and landscaping of the Harborwalk areas should be implemented and developed to create a visually inviting and easily accessible public space to the waterfront for the boating and non-boating public.

The Town should further study of the Harborwalk extension possibilities to the Lighthouse/Cedar Point area ("Lighthouse Route") and "First Cliff Route".

2. Water Use

Summary of Water Use Actions

- Initiate and maintain an active program of aquaculture improvements.
- Undertake a regular planned review of the town mooring layout.
- Mark as off-limits for moorage any areas requiring protection for water quality and shellfish resource protection.

- Designate more precisely all mooring areas to reduce conflicts with other uses in the harbor.
- Set aside five moorings for emergency and storm usage.
- Initiate a process for short-term and long-term maintenance dredging.
- Secure alternate sources for pump-out facilities.
- Maintain commercial fishing facilities and correct deficiencies in the configuration and condition of off-loading facilities through improvements to Scituate Town Pier.
- Provide for improvements for other commercial boating as part of the reconstruction and improvements to boat ramps.
- Promote development of sport fishing through improving existing facilities and promoting re-introduction of indigenous species.
- Provide for the ongoing promotion of a working boatyard through continued development of Scituate Marine Park.
- Investigate the potential for establishing additional ramp locations in the North and South Rivers.

Commercial Fishing

The Plan reinforces the ongoing importance of commercial fishing in the economic and cultural life of Scituate. In the short term, the fin fish industry is experiencing substantial stress due to resource supplies and an emerging regulatory structure. As a result, there are shifts in the requirements for both water-side and shore-side facilities. In the long term, requirements remain difficult to predict. As a result, the Waterways Plan recommends that commercial fishing facilities be maintained and existing deficiencies in the configuration and condition of off-loading facilities be improved. In addition, the Waterways Plan recommends that Scituate Town Pier be improved to provide for flexibility in its use for large boat commercial fishing.

The small boat commercial fishing industry is substantially under-served in regard to shore-side facilities. The Plan recommends that the boatyard operations at Scituate Marine Park be strongly supported to provide substantially improved opportunities for repair.

In addition, boat ramp improvement projects at the Cole Parkway Ramp, the Office of Fishing and Boating Access Ramp on Jericho Road, and the Driftway Park should be undertaken to allow access to more of the tidal cycle and improved accommodation of trailer parking. Moreover, steps should be taken to increase parking capacity, particularly for trailers, through physical improvements or management measures.

Aquaculture

The Waterways Plan calls for the general continuation of the existing pattern of shellfish aquaculture, particularly in the North and South Rivers, and along Scituate's shoreline in Cohasset Harbor, with emphasis on support for programs to resolve pathology problems and to support shellfish propagation and productivity. Potential expansion of shellfish beds should be pursued to the extent that they do not conflict with other uses. The Waterways Plan also calls for measures to support fin fish aquaculture in appropriate locations.

Other Commercial Boating

The Waterways Plan supports measures that increase the capacity for excursion boats docking in the harbor. The Waterways Plan also supports measures to substantially improve the shoreside accommodation of larger cruising ships.

Sport fishing

The emerging sport fishing industry has the potential to become a significant economic factor. Activities that support this industry, such as supporting facilities and the re-introduction of indigenous species, such as salmon to the North River, should be encouraged.

Recreational Boating

The Waterways Plan supports measures that provide increased amenity and safety for recreational boating. These measures should include the provision of appropriately located dinghy docks, showers, laundry facilities, lockers, and other facilities available for the transient boater.

Navigation

The Waterways Plan recommends a series of measures to improve navigability within the harbor. These recommendations include the continued monitoring of shoal areas and maintenance dredging in the Harbor and in the North and South Rivers. The Plan also calls for the removal of any mooring floats within the harbor navigation fairways and channels, and the continued monitoring of these locations by the Harbormaster.

3. Public Facilities

Summary of Public Facility Actions

- Fund and construct Scituate Town Pier improvements.
- Undertake a planned program of public access and water-dependent capital improvements as listed in the Waterways Plan.
- Establish a planning process and reach a conclusion on an improved small boat commercial facility, and pursue funding for these improvements.

- Establish a planning process and reach a conclusion on public recreation programs and pursue funding for these improvements.
- Confirm and protect existing public access rights and open space.
- Establish a planning process and reach a conclusion on the boat ramp facilities at Cole Parkway, Jericho Road, and the Driftway Park and pursue funding for these improvements.

Scituate Town Pier

The Waterways Plan maintains the intention of Scituate to preserve the multiple-use commercial functions of Scituate Town Pier. It reinforces the need to maintain and improve the Pier to redress its deteriorated condition. The Plan calls for flexible accommodation of all water-dependent uses that generate adequate income to offset operating costs, and contribute to capital funding of the improvements that may be needed.

Scituate Marine Park and Scituate Maritime Center

The Waterways Plan calls for ongoing construction and improvement to Scituate Marine Park and Scituate Maritime Center. Scituate Marine Park should become a focal point of the Harbor in supporting a working commercial harbor while supporting recreational boating, promoting and preserving the Town's maritime heritage, and encouraging people of all ages, abilities, and economic levels to participate in recreational, educational, and social activities on or near the water.

Public Landings and other Publicly-owned Lands

The Waterways Plan calls for a list of projects and improvements that would serve to upgrade the public access areas to the waterfront. This list includes improvements in paving, improvements to accommodate vehicle and boat access and improvements to provide public amenities and the like. For all public access points, a new and attractive signage system should be put in place that indicates public access and amenities. This signage system could also be used for public access within properties subject to Chapter 91 public access requirements and agreements as discussed elsewhere.

Funding for improvements may come from a variety of sources. This Plan envisions the use of a dedicated fund—the Harbor Access Gift Fund—administered by the town. The fund would be financed through grant sources, Chapter 91 cash contributions that are channeled to the town including DEP displacement fees paid to the Waterways Enterprise Fund, direct town contributions, and other sources.

Other Public Improvements

Other public improvements recommended in the Waterways Plan include access and physical improvements to several areas along the water's edge.

There are limited opportunities for public access to the water's edge along significant portions of the Harbor front. The Plan recommends that research be conducted to identify areas where increased public access might be possible through purchase of easements, agreements, or other actions.

4. Proposed Local Regulatory Framework for Chapter 91

Summary of Actions Concerning the Regulatory Framework for Chapter 91

Planning Board responsibility for local license review.

- Harbormaster, with the approval of Board of Selectmen, should provide comments and recommendations to the Planning Board relating to Chapter 91 applications.
- Planning Board should notify Harbormaster and Waterways Commission of all Chapter 91 applications and any public comments on any Chapter 91 applications.
- Establish and approve final methodology for determining appropriate on-site and off-site improvements and for calculating cash contributions to Harbor Access Gift Fund.

Massachusetts' principal tool for protection and promotion of active water-dependent uses of its tideland and other waterways is M.G.L. Chapter 91 (Public Waterways Act, 1866). Chapter 91 and the waterways regulations (310 CMR 9.00) are administered by the Division of Wetlands and Waterways of the Massachusetts Department of Environmental Protection. The mechanism for regulation is a license that must be obtained by all property owners or jurisdictions that occupy qualifying locations. The Chapter 91 regulations apply to all of the existing tidal waters below low water mark in Scituate, and affects certain land and property above this line.

The Plan includes a prioritized list of public actions that have been established specifically to improve access to the water. This list should serve as the guide for public improvements to further Chapter 91 regulatory goals on a community-wide basis. It is noted that the Planning Board's Coastal Access Study included a complete review of the potential use of Chapter 91 licenses to increase public access to Scituate Harbor.

5. Long Term Plans

Summary of Actions Concerning Long Term Plans

- Authorize the Harbormaster's Office and the Scituate Waterways Commission to continue planning efforts for long-term improvements such as breakwaters and substantial dredging initiatives.

The Waterways Plan includes a series of long term goals for the Harbor, and outlines a process for studying, reviewing, and implementing these long term improvements. The long term goals of the Waterways Plan include increased protection of the harbor mooring areas, expansion of these areas through a dredging program, and the use of dredge material to provide increased beach area in appropriate locations along central waterfront areas that have experienced beach depletion or where private improvements have encroached substantially on available beach areas.

6. Implementation Framework

Scituate Waterways Commission

The Scituate Waterways Commission is actively engaged in planning for the waterways of the Town. It has been responsible for major waterways improvements that are now taking place and have been implemented in the last ten years, including the development of Scituate Marine Park, the dredging of the South River and Scituate Harbor, and rebuilding the jetties at the Harbor's entrance. These improvements grew out of the Commission's action planning efforts and have a value in the \$6 to \$10 million dollar range. The Waterways Commission's planning also led to the rewriting of waterways regulations that ensure that the harbor is open to all, by prohibiting the sale or unrestricted transfer of moorings.

The Plan recommends that the Harbormaster's Office, with appropriate recommendations from the Scituate Waterways Commission, will provide for coordinated management of the harbor. Representatives from the Harbormaster's Office regularly meet with representatives of key departments, boards with jurisdiction over harbor and water-related activities, and representatives of industries with interests in the management of the waterfront. The Scituate Waterways Commission would be responsible for monitoring the implementation of the Waterways Plan and preparing updates. The Scituate Waterways Commission would provide recommendations concerning changes in the Waterways Bylaws and Shellfish Regulations. The Commission would make recommendations on the disbursements of the Waterways Enterprise Fund and on all capital improvements relating to the waterfront other than as provided for elsewhere.

Other Existing Departments and Entities

The Plan envisions relatively minor changes in the roles and responsibilities of other existing departments and boards within the town. The Harbormaster would retain all current duties and responsibilities. Several departments and entities, including the Town Manager's office would need to participate in ongoing planning and implementation tasks.

Chapter 91 Implementation Process

As a Municipal Harbor Plan, the Scituate Waterways Plan includes the specific implementation mechanisms of:

- Designation of the Harbormaster's Office as the entity responsible for reviewing local Chapter 91 license applications for consistency with the Scituate Waterways Plan, and preparation of recommendations to the Commonwealth, or in conjunction with the Planning Board, if necessary.

II. Review of the Waterways Planning Process

A. Preparation, Review and Approval Process

The Scituate Waterways Plan has been prepared by a town-appointed Waterways Planning Sub-Committee of the Scituate Waterways Commission of the Town of Scituate. The Waterways Plan represents the culmination of several years of effort on the part of many participants in the planning process, as summarized below.

The Waterways Plan is intended to fulfill two related needs. The first need is to resolve numerous local issues concerning both land and water use so that Scituate Harbor can be better managed as a town resource in the future. The second need is to resolve special regulatory issues growing out of the Commonwealth's jurisdiction over qualifying tidelands (historic and current).

The Commonwealth of Massachusetts maintains public access rights to qualifying coastal areas for "fishing, fowling, and navigation" through M.G.L. Chapter 91 (Public Waterways Act, 1866). These rights are currently regulated through the provisions of the regulations within the Waterways Regulations (310 CMR 9.00, 1990). These regulations create numerous specific requirements for the use and disposition of improvements on certain land and flowed tidal areas within Scituate. An alternative method for establishing locally-appropriated regulations is provided by the state in the form of a Municipal Harbor Plan, which is approved by both the town and the Commonwealth. The special requirements and process for preparation of a Municipal Harbor Plan are specified in a separate but related set of regulations, Review and Approval of Municipal Harbor Plans (301 CMR 23.00, December, 1994).

Presently, the Harbormaster's Office and the Scituate Waterways Commission are the principal sources by which the Town's Board of Selectmen are informed of issues relating to management and use of the Harbor and Town waterways. The issues regularly faced by the Harbormaster's Office and the Scituate Waterways Commission were referenced to help create the list of key issues that were included in the Scope for this Waterways Plan.

It was decided the Waterways Plan should fulfill the special requirements of a Municipal Harbor Plan consistent with the Commonwealth of Massachusetts Requirements and that coordination with the staff of the Office of Coastal Zone Management was paramount.

Public Forums

The preparation of the Waterways Plan was initiated in September, 2007. A public meeting was held at the Scituate Town Library on November 17, 2008, for the Waterways Commission to provide current information on the state of the Scituate waterways. A notice of a Public Forum to introduce the proposed Scituate Waterways Plan was publicized in *The Boston Globe*, *The Patriot Ledger* and the *Scituate Mariner*. The intent of the meeting was to provide an initial overview of the proposed Plan, to obtain public input on specific issues of interest to incorporate in the Waterways Plan, and to answer any questions relating to development or usage of the Waterways Plan.

It was decided that as an initial step the Waterways Commission would issue an Existing Conditions Report. The Existing Conditions Report would include information related to the review of existing reports and information and would provide a historical basis for development of alternative approaches to the waterways' future. The Waterways Commission reviewed documentation related to the regulatory, economic and social context of the waterways and reports of physical land and water conditions, the regulatory environment, economic and management conditions, the social and historical setting, and key issues that have been identified at the initial public meeting.

Subsequently, the Waterways Commission issued an Existing Conditions Report. The Existing Conditions Report detailed the current conditions of the Scituate Waterways and addressed particular areas of concern identified at the public meeting on November 17, 2008.

A second public meeting was held on February 25, 2009, at which public input was solicited in response to the release of the Existing Conditions report. A notice of a Public Forum to solicit public comment or questions relating to the Scituate Waterways Existing Conditions Report was publicized in *The Boston Globe*, *The Patriot Ledger* and the *Scituate Mariner*. The Existing Conditions Report was posted on the Town Harbormaster's website in PDF format and on January 25, 2009, notice of public access to view the Report was e-mailed from the Town webmaster to the master Town e-mail list. The intent of the meeting was to solicit public comment or questions relating to the Scituate Waterways Existing Conditions Report, or to the development of the Waterways Plan. The meeting was broadcast on the local cable access channel.

A Draft Plan was completed in September, 2010. It will be the subject of public review and comment, including a public meeting. The Draft Waterways Plan will also be reviewed by the Scituate Waterways Commission, the staff of the Office of Coastal Zone Management, and others. Based on the review and comments, a proposed Final Waterways Plan will be formally submitted for final review and approval to Scituate Board of Selectmen. Public notice of a formal review period will occur at that time. It is anticipated that final approval of the Waterways Plan by the Scituate Board of Selectmen will occur by 2011.

Other planning efforts have also contributed significantly to the research and conclusions of this Master Plan. Principal among these planning efforts was the Town of Scituate Master Plan, Adopted by Annual Town Meeting, March 13, 2004.

B. Participants

The Scituate Waterways Plan has been prepared through broad participation of many individuals and entities. The following is a partial list of the entities and individuals who have contributed to its preparation and the discussion of the issues and recommendations which have emerged.

Board of Selectmen
Scituate Harbormaster
Waterway Commission
Town Planner
Town Building Commissioner
Town Manager

Director of Public Works
Commonwealth of Massachusetts, Executive Office of Environmental Affairs
Office of Coastal Zone Management
Department of Environmental Protection
North and South River Watershed Association
Town Conservation Commission
Town Recreation Commission

III. Summary of Existing Conditions

A. Overview

The initial product of the Scituate Waterway Commission's planning process was a review of Existing Reports concerning the Scituate Waterways. The review served as a historical basis for the development of alternative approaches to the harbor's future, and provided the framework for developing a Waterways Plan. Also, a public comment meeting was conducted on November 17, 2008, at the Scituate Town Library, at which an overview of the planning process was presented and public comment was solicited as to critical planning areas and concerns. Notice of the upcoming November 17, 2008, public comment meeting was placed timely in the Scituate Mariner, The Patriot Ledger, and the Boston Globe.

The review of Existing Reports included not only the physical conditions, but also the documentation of the regulatory, economic and social context of the harbor. Included in the review were reports of physical land and water conditions, the regulatory environment, economic and management conditions, the social and historical setting, and key issues that had been identified at public meetings. This section of the Existing Conditions Report summarizes and updates relevant portions of reviewed Existing Reports to provide a reference for the development of a Waterways Plan.

B. Historic Setting and Social Context

The name Scituate is derived from an Indian word which the early settlers understood as Satuit, which means "Cold Brook", and referred to the small stream flowing into the harbor; this they spelled in various ways as Sityate, Cituate, Seteat, etc., and it was not until about 1640 that the name came to be universally spelled in its present form. No one knows why the silent "c" was added, but around that time it was quite common to add this "c" to such words as site, situation, etc.

Scituate more than any other location along the shore of Cape Cod Bay presented to the explorer a distinctive front toward the sea which very soon after the settlement at Plymouth attracted venturesome colonists to our shores looking for fertile lands to cultivate and perhaps to find a suitable place to live and establish their homes. The sea front marked as it was by four water washed gravel cliffs suggested good planting lands in the interior, and it was on one of these cliffs that the first use of the land was made for this purpose, this was previous to 1628, we do not know for sure the exact year the first plantings were made here.

In some part of the years 1627 or 1628 a group from Plymouth augmented by new arrivals from the County of Kent in England came here and formed the first permanent settlement. They laid out their village a mile or so back from the coast behind one of the cliffs, established a public way or street, which they named Kent Street, which name it still bears, and allotted space on this street to the various householders forming the Company. They were of course under the jurisdiction of the General Court at Plymouth, and it was not until 1636 when the population had increased that permission was given to elect certain officers and to some extent carry on their own affairs, an act which we refer to as the incorporation of the Town, and its boundaries were established substantially as follows: on the east the sea, south the North River and is tributary the Indian head River to its head, westerly by a line to the centre of Accord Pond, and from thence to the sea by the line marking the boundary between the Plymouth and Massachusetts Bay Colonies. Other grants were later, viz. the so called Two Mile in Marshfield and the Hatherly Grant of three miles square on the westerly side of the above boundaries which is now contained in the Town of Rockland, then a part of Abington.

In establishing the bounds of Scituate the General Court at Plymouth took the somewhat strange action of reserving a section in the northerly part of the Town for the exclusive benefit of certain individuals, viz. Messrs. Hatherly, Beauchamp and Shirley. This grant included the entire part of the Town northerly from Satuit Brook and extending to the Conihasset marshes; as the bounds were not definite and some settlers had previously occupied parts of this land controversies arose which were not adjusted for several years. In the meantime Mr. Hatherly purchased the entire tract from the other grantees and in 1646 divided it into thirty shares, reserving one fourth of them for himself and sold the remaining for 180 pounds to a company which became known as the Conihasset Partners, which Company functioned as a Government, carrying on its own affairs, building its own roads, keeping its own records etc. in disregard of the fact that they were legally and technically a part of the Town of Scituate with no objections on the part of the Town, which was due probably to the fact that the proprietors of the Conihasset Grant were also men interested in the government of the Town itself. The last meeting of the Partners was held in 1767, after which their affairs reverted to the town.

As time went on and the population in the westerly part of the Town increased the people there becoming desirous of self government a portion of the original grant was separated and incorporated as the town of Hanover, this was in 1717 and seems to have been accomplished without any serious opposition by the parent town, and in 1849 a further reduction in the territory of the town was made by the separation of another westerly section which became the town of South Scituate, which name was later changed to Norwell, in honor of a prominent citizen and benefactor of that town. The section referred to above as the Two Mile, really a part of Marshfield was ceded back to that town in 1788, again without any serious opposition on the part of the people of Scituate. Thus the town became as it is now, containing about 10,000 acres and in possession of its greatest asset, the several miles of shore line and beaches, which was formerly considered a useless liability, but is now the most valuable property in town.

Scituate in common with other country towns was a slow growth in population during the first two centuries of its existence; the lack of good roads and the difficulties of transportation did not encourage people to settle here so the greatest increase was in or near large cities.

The coming of the railroad in 1871 helped to some extent, but it was not until the advent of the automobile and the building of better roads that any marked increase was noted. As late as 1900 the population hardly exceeded 2000, from then on the increase was rapid and in the last ten years a great increase in population has occurred so that the census of 2010 gives approximately 18,266 year round residents.

C. Physical Water and Land Conditions



(Aerial of Scituate Harbor from Southeast – 2007)

1. General Description

The Town of Scituate is located south of Boston in the middle of Massachusetts Bay. It is bordered by the Town of Cohasset to the north, the Town of Marshfield to the south, the Town of Norwell to the west, and Massachusetts Bay to the east. The tidal coastline of Scituate consists of 21 miles. As noted in Section I, the waterways planning area includes all of the land and uses immediately adjacent to the harbor within the town limits, between the Town of Cohasset to the north, the Town of Marshfield to the south, and the Town of Norwell to the west. The Waterways Plan also includes the waters of the North and South Rivers within Scituate's jurisdiction.

The water's edge within the planning area represents varying characteristics. Scituate Harbor is a natural harbor that is protected at its entry way by two jetties to the north and one jetty to the south. The jetties are comprised of granite boulders. The Harbor is divided into an outer harbor and an inner harbor, separated by a narrow channel opposite Old Dock Street. The inner harbor ends where Satuit Brook enters the Harbor through a culvert underneath Front Street. The mouth of the North and South Rivers is located approximately one mile to the south of the entrance to Scituate

Harbor. The land between the entrance to the Harbor and the North and South Rivers contains three well-known cliff landmarks each that are separated by low lying areas and which are identified from north to south as First Cliff, Second Cliff, and Third Cliff. Fourth Cliff is located across the mouth of the Rivers to the south.

The North, South and Herring Rivers and their many tributaries, including the First, Second and Third Herring Brooks, can best be characterized as a major estuarine system which meanders through extensive salt marsh in Hanson, Hanover, Pembroke, Norwell, Marshfield, and Scituate. They join the sea at a common mouth surrounded by tidal marshes and sand dunes in the Town of Scituate.

The Rivers' common mouth was at one time in an area just south of Humarock Beach and formed the boundary between Scituate and Marshfield. In November, 1898, a storm which blocked the original mouth with sand and made it a part of the beach also broke through a new mouth in the present location just north of Fourth Cliff. This New Inlet is an extremely dangerous navigation area due to the combination of the confluence of the two rivers at the mouth and the high volume of water that passes through a constricted area during the tide changes which result in constantly shifting sands. The land to the north of the mouth is a well known boating destination known as the "Sand Spit" or "Spit". The Spit is a beach area developed principally from sand deposits from the tidal flow of the two Rivers. Significant sand flats at the Spit are revealed at low tide. The Humarock barrier beach is accessed through the Town of Marshfield.

The South River proceeds southward from the mouth just west of the Humarock Beach peninsula, roughly parallel to the beach. The northernmost stretch of the South River has marshy tidal flats and marshlands to the west and barrier beach to the east. The marshland to the west ends abruptly with the sharp rise of Ferry Hill, which recedes back to more low lying areas and tidal marshes beginning to the south beyond the Julian Street Bridge. The Scituate portion of the South River terminates beyond the Sea Street Bridge with Rexhame Beach to the east and marshlands to the west, as it continues into Marshfield beyond that point.

The North River meanders generally eastwards from the mouth with marshlands and tidal flats to both the north and south until reaching the channel at Damon's Point. From Damon's Point to the Route 3A Bridge, the south marsh significantly narrows to woodlands while the marsh to the north remains expansive. Westward of the Route 3A Bridge, the marsh is expansive on both sides of the River until the turn of the River below Neal Gate Street where the north marsh tightens to woodlands. Shortly after that point, the Scituate portion of the North River terminates with Marshfield to the south and Norwell to the north.

The Herring River branches off of the North River shortly after the North River passes the Sand Spit. The Herring River flows north and then west with primarily marshland on both sides of the River. The Driftway Park and landing is a major landmark on the River. The Herring River gets very shallow beyond the James Landing Marina as it flows beneath the Driftway where it is fed by the First Herring Brook.

In general, the edges of the water throughout the planning area are intertidal beaches of various widths. Major exceptions include the extended granite bulkheads on First Cliff, Second Cliff and Third Cliff that provide storm surge and erosion protection for the Cliffs. Another major exception is the bulkheaded edges of Scituate Harbor, including the northern edge of the Harbor along Cedar Point, the west side of inner Scituate Harbor that begins approximately at Old Dock Street and extends along the west edge of the inner harbor until it meets Front Street, and the bulkhead in front of Scituate Marine Park. Other smaller private bulkheads have been created to protect specific beach parcels, some of which represent the water's edge at high tide.

Water depths along the Town beaches generally follow a shallow gradient from the beaches to deeper water. A combination of natural water depths and maintained channels allow for navigable areas in Scituate Harbor, and serve the marinas and piers along the Harbor's edges, including the Town Pier and the Stellwagen Bank National Marine Sanctuary Pier. The three stone breakwaters at the outer edge of the Harbor protect the outer harbor area.

Consistent water depths in the Harbor are maintained by ongoing maintenance dredging projects. Along the North River and South River, consistent currents maintain deep water channels for navigation, but periodic maintenance dredging is required at the mouth of the Rivers and in both Rivers due to the accumulation of sand and sediment. Currents in the Herring River maintain a navigable channel to James Landing Marina, but the navigable entrance to the Herring River is narrow with significant sand and sediment buildup creating hazardous shallows at low tide. The Herring River has experienced continuous silting since the closure of the Boston Sand & Gravel Plant, which at one time maintained a dredging operation on the River.

2. Water Use

There are a variety of waterways water uses including tourism, transportation, recreational uses, fishing, and commercial uses. This study has reviewed pertinent information concerning the following list of the waterways' water uses.

Commercial and recreational fishing	Moorings for all types of vessels
Sailing	Pleasure boating
Boat storage	Bird watching
Diving	Boat repair
Lobstering	Waterfront events
Commercial charter	Coast Guard operations
Boat launching	Cruise anchorage areas
Kayaking	Seafood off loading
Swimming	Sun bathing
Marinas	Aquaculture
Coastal research	Jet skiing
Fueling	Harbor shuttles
Water skiing	Beach strolling
Rowing	Surfing

The following is a summary of the key uses that were considered in detail during the review process.

Moorings

The town issues approximately 650 individual moorings annually, a number that is generally fixed. The moorings are located throughout the harbor and North and South Rivers. Guest moorings are available from launch services or through private Yacht Clubs or Boat Clubs.

Mooring rules and regulations are contained in the Scituate Mooring Regulations & Waterways Bylaws, most recently revised in 2004 (See Appendix A). The regulations include provisions for permits and fees, mooring equipment, water quality, enforcement and mooring allocation.

Water-based Transportation

There are currently no ferries/excursion boats that regularly serve Scituate. There are currently no freight boats serving Scituate, nor is there a facility that can accommodate freight.

Boatyards

There is one boat repair service in the Harbor operated by Scituate Boat Works on leased property from the Town of Scituate at Scituate Marine Park. The boatyard offers a 35 ton travelift structure for boat outhaul and offers a full array of boatyard repair and storage services. It is anticipated that the commercial fishing fleet in Scituate and surrounding towns will benefit significantly from the commercial marine operations at Scituate Marine Park.

Marinas and Private Moorings

There are numerous marina facilities in the Harbor Area and along the North and South Rivers.

Marine Pump-out Facilities

The Scituate Harbormaster's Office operates a shore-side pumpout facility located at Cole Parkway Marina in Scituate Harbor. Pumpout service has been provided since 1996. The pumpout was purchased with local funds and a grant from the CVA program. Waste from the pumpout facility is discharged directly to the municipal sewer system. Waterline Mooring Service operates a CVA funded pumpout boat that services Scituate Harbor and complements the municipally operated shore-side service. The pumpout boat is equipped with a 300 gallon holding tank. Waste from the holding tank is discharged to the municipal shore-side facility at Cole Parkway Marina approximately 4 times a week. Harbor Mooring Service operates a CVA funded pumpout boat that services the North and South Rivers. This pumpout boat is equipped with a 300 gallon holding tank. Waste from the holding tank is discharged to the municipal shore-side facility at Cole Parkway Marina approximately 2 times a week. James Landing in Scituate, located on the Herring River which is a tributary to the North River, is a private marina that provides shore-side pumpout service. This service has been in operation since 1994. Waste from the shore-side pumpout facility is discharged directly to the municipal sewer system.

In addition, Mary's Boat Livery, located on the North River just upstream from the Rt. 3A Bridge, operates a CVA funded 50 gallon capacity pumpout cart. Waste material from the cart is stored on-site and emptied by All-Town Septic Hauler Company. The Bridgewater Marina, located on the South River, is equipped with a stationary shore-side pumpout. Waste material is emptied to a 2000 gallon tight tank which is then emptied by All-Town Septic Hauler Company. Ferry Street Marina, located on the South River is equipped with a 30 gallon capacity pumpout cart. Waste material is then transferred from the cart to a tight tank, as needed, which is emptied once a month. White's Ferry Marine, located on the South River is equipped with a pumpout cart which is emptied to a 2000 gallon tight tank as needed. The waste is then removed by All-Town Septic Hauler Company.

Pumpout Facilities: Dockside: Cole Parkway Marina (Town of Scituate), Riverway Marina (Herring River). Pumpout Boats: Waterline Services, Scituate Harbor, Harbor Mooring Services, North & South Rivers.

Courtesy Docks

A small courtesy dock is provided by the town at the Cole Parkway Marina. Boaters are allowed to tie-up temporarily at the Town operated Cole Parkway Marina based on availability of space. This dock serves temporary docking needs of harbor taxi services. The town has a skiff/dinghy dock locations at the Town Pier, Cole Parkway Marina and Scituate Marine Park. Seasonal skiff dock permits are available through the Harbormaster. The Jericho Road boat ramp has courtesy docking with a 15 minute tie-up limit.

The Town maintains a minimum of 4 to 6 slips that are available for transients at the Town-owned marinas. At Cole Parkway Marina and Scituate Marine Park Marina space is available for vessels up to 45' based on a first come first serve basis.

Launches

- Cedar Point Launch – Channel 09
- EZ Rider Launch – Channel 09
- Satuit Boat Club Launch – Channel 09
- SHYC Launch – Channel 09

Power Washing Station

- A power-washing station is operated by the boatyard operator at the Scituate Marine Park.
- A power-washing station at 3A Marine on the North River is currently being planned.

Oil Spill Response

The Town maintains four oil spill response kits which contain booms and oil absorbent pads. The Town just received a trailer from the State which is outfitted with more extensive oil response equipment. The trailer is under the control of Scituate Fire Department.

Wetland Resources

The Scituate Conservation Commission oversees wetland resources for inland and coastal wetlands of Scituate.

3. Land Use

Scituate Harbor

In September, 2006, The Watershed Action Alliance of Southeastern Massachusetts prepared a comprehensive five year “South Coastal Watershed Action Plan” that included separate chapters on the “Gulf River and Scituate Harbor Watersheds”, the “North River Watersheds”, and the “South and Green Harbor Rivers Watersheds”. The chapter on the Scituate Harbor watershed identified land use as 60% residential, 24% forest, and 7% open land.

Water-dependent Land Uses Along Scituate Harbor

There are five principal areas along Scituate Harbor which feature water-dependent land uses. The first area is located on the east side of the inner Harbor at the Scituate Marine Park and includes two water-dependent industrial uses: a boatyard and boat storage facility. It also includes a municipal hub for recreational and educational activity at Scituate Maritime Center. A second major area is on the west side of the inner Harbor along Cole Parkway and includes the Cole Parkway Marina which houses the U.S. Coast Guard facilities and the Harbormaster’s Office and includes a private commercial offload docking facility for lobster and fishing boats. The third major area is the Scituate Town Pier located in the middle of the Harbor. The fourth major water-dependent activity on shore lands in this area is located just south of the mouth of the Harbor where National Oceanic and Atmospheric Administration maintains offices and research facilities to oversee the Stellwagen Bank National Marine Sanctuary. The fifth major water-dependent activity on shore lands is boat trailer parking at the Jericho Road boat ramp maintained by the Massachusetts Office of Fishing and Boating Access.

As in most other areas, the market demand for water-dependent uses is relatively weaker than demand for nonwater-dependent uses, such as residential and retail. As a result, over time higher valued nonwater-dependent uses have tended to displace water-dependent uses. In Scituate as elsewhere, the space occupied by water-dependent uses has been in decline over the years. A review of historical maps and documents and interviews with Scituate residents reveals a consistent and substantial long-term decline in the number and variety of businesses and in the amount of waterfront area dedicated to commercial fishing and vessel-related uses.

It is important also to take into account the fact that the harbor front of Scituate is nearly entirely built-out with nonwater-dependent uses that are on small lots. Under these conditions, land

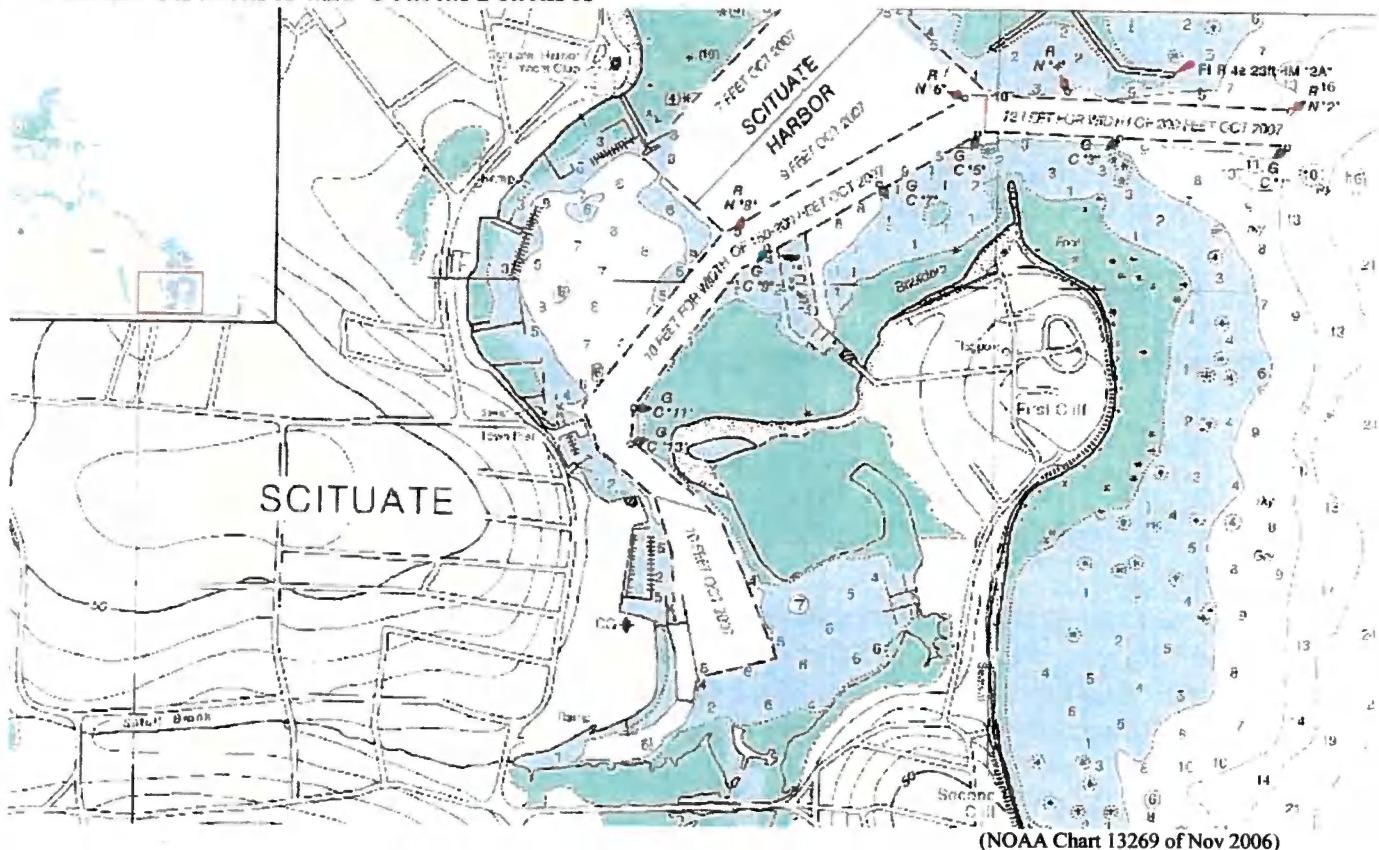
assembly would be extremely difficult for any water-dependent use requiring relatively large and contiguous sites, even if land values were not a dominant factor.

A Final Report for The Scituate Harbor Village Design Charrette was completed by The Cecil Group in June, 2002. Existing conditions relating to the village of Scituate Harbor were documented, and a series of recommendations made that identified community needs, envisioned a revitalized downtown, reviewed solutions other communities have applied to similar problems, developed specific design actions and identified steps necessary to implement the plan. The plan also includes proposed enhancements to the townscape. Principal recommendations of the plan relevant to the Waterways Plan include:

- Creating an Identity for Scituate Harbor.
- Improving the Streetscape Design of Front Street.
- Traffic, Circulation and Parking.
- Develop a continuous pedestrian way along the waterfront, connecting one end of Front Street to the other, with interspersed destination amenities.
- Improvements to the Waterfront.
- Cole Parkway Improvements.

The recommendations of the plan were largely adopted in the Town of Scituate Master Plan of 2004, and a Waterways Plan likely will endorse the recommendations of the Master Plan relating to the Harbor area.

4. Marine Structures and Coastal Features



Scituate Harbor is a natural deep harbor with a mean tidal range of 9.7 feet, and prevailing winds from the south/southwest in the summer and north/northeast in the winter. The central harbor is defined by the waterside Front Street and Jericho Road to the west, with the Town Pier in the middle of the two roads.

The harbor is entered from the east. Stone armored jetties to the north and south of the entrance to Scituate Harbor afford protection. Historic Scituate Lighthouse stands on the north shore of the entrance to the Harbor, and a flashing red light on a tower at the end of the north jetty serves as the federal aid to navigation for the Harbor's entrance.

A 100 foot wide Federal Channel of 10 foot depth extends from the jetties into the inner harbor, ending opposite Cole Parkway Marina.

The historic shoreline apparently was just seaward of Front Street and Jericho Road. This shoreline has remained relatively constant over time, but some shoaling has occurred along both ends of the Federal Breakwaters. The Corps of Engineers most recently dredged the Federal Channel in 2002.

The long shore drift is generally to the south. Perpendicular beach obstructions generally cause cut-off of drift resulting in mounding in some areas. Structures, such as storm drain outfalls, tend to get sanded in.

Scituate Town Pier

Scituate Town Pier is a concrete deck, sheet pile supported pier, owned and operated by the town. The pier is in reality a town fishing pier with the exception of 30 dinghy spaces, some of which are used by the fisherman. The pier was last rebuilt in 1986-87. This pier serves as the commercial hub of the waterfront. Fishing vessels dock on the north and south sides and unload, load and fuel on the east side. Uses of the pier include the following:

- Berthing is provided for 15 commercial fishing vessels ranging from 40' to 80'.
- Fishing vessels lease float spaces from the town.
- There is a private fish off loading facility where fish is iced and immediately shipped out: Their trucks pick up fish on the Pier.
- A dinghy dock is located on the north side of the Pier.

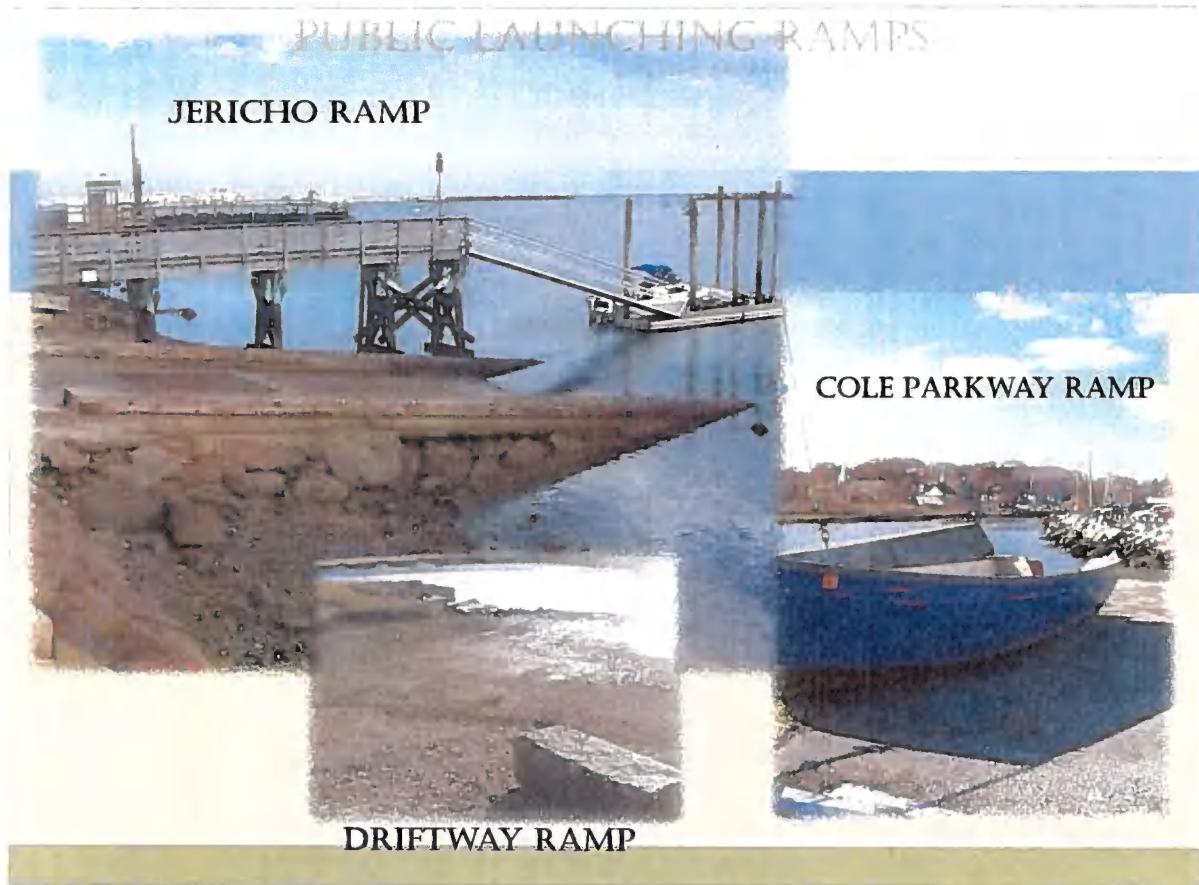
The pier has electric and water service. Neither public restrooms nor recreational boat fueling or boat outhaul facilities are available on the Pier. The Town has completed an engineered evaluation of the integrity of the Pier which identified some structural deficiencies and also made recommendations for improvements and expanded utilization.

Federal Breakwaters

The federal breakwater at the entrance to the harbor was most recently renovated in 2003. The two jetties to the north and one to the south consist of granite blocks.

Boat Ramps

The Harbor has two boat ramps. The town-owned Cole Parkway Ramp is restricted by tide and lack of support floats. The Jericho Road ramp is maintained by the Massachusetts Office of Fishing and Boating Access. Also, a small boat ramp is located at the Driftway Park on the Herring River. The use of a boat ramp at Scituate Marine Park was limited in the 1980's by restrictions imposed by the Conservation Commission.



5. Environmental Conditions

Water Quality

The coastal marine waters of Scituate are classified 'SA', according to CMR 314. SA-classified waters are suitable for any high quality water use, including bathing, swimming, and shellfishing. The Massachusetts water quality standards for SA-classified waters are contained in Appendix D.

The major concerns regarding the quality of harbor waters are stormwater management and debris. In some locations, in particular along the North, South, and Gulph Rivers and salt ponds, private septic systems also contribute to degradation of coastal waters. The 6 major contributors as:

- Land Generated Marine Debris, from mishandled garbage;
- Discharge Pipes, mostly from street drains;
- Sewage Discharge, from waterfront septic systems and boats of all sizes;
- Boat Generated Marine Debris, from mishandled garbage;
- Marine Nets and Lines, lost at sea, and deliberately tossed overboard; and
- Public Awareness/Information, (or the lack of) relating to debris impacts, disposal facilities, and the appropriate means of handling garbage in a coastal setting.

Water in Scituate is derived from the town reservoir and municipal wells. Town storm drainage facilities include a series of variable aged piping and catch basin systems. There are currently outfalls that discharge into Scituate Harbor, contributing to the water quality problems in the harbor.

Sewage/Title V

Scituate has a municipal sewage collection system that services part of the town, including Scituate Harbor and the Sand Hills area. An extension to the area of North Scituate surrounding Musquashcut Pond is currently in process. Residences and other users with on-site subsurface disposal systems are regulated by the State Environmental Code, Title V (310 CMR 15.00), which outlines the minimum requirements for the subsurface disposal of sanitary sewage.

D. Regulatory Environment

1. Jurisdictional Context: Introduction

Scituate Harbormaster

The Harbormaster is the managing authority over Scituate Waterways. The Harbormaster has two full-time Assistants who provide administrative and operational support. The Harbormaster manages fourteen seasonal assistants who conduct patrols, search and rescue missions, enforce MGL Chapter 90B and local ordinances, and maintain all Town owned waterways facilities.

The Harbormaster's Office has the overall responsibility for the operation, planning and administration of the Waterways Enterprise Fund. The Harbormaster provides fiscal and operational management of the municipal marinas and the allocation of moorings, which include policies and procedures and management responsibility for revenue collection including mooring fees, slip fees, dinghy fees, M.G.L. Chapter 91 Section 10A permits, commercial and transient tie-up fees. The Harbormaster oversees the management and regulation of over 600 moorings, two

municipal marinas and a commercial Town Pier within the boundaries of Scituate Harbor and the North and South Rivers. The Harbormaster issues annually approximately 50 Chapter 10A permits for the annual placement of floating docks held in place by bottom anchors. These floats are used for swimming platforms, boat moorings, lobster cars, and marinas.

Waterways Commission

The Scituate Waterways Commission is authorized under Scituate General Bylaws Section 20520. The Scituate Waterways Commission consists of nine members, one of whom is the Harbormaster or a designated representative of the Harbormaster's Office. The members and associates are appointed by the Board of Selectmen for three-year over-lapping terms. Associate members have no vote. The Waterways Commission serves as advisors to the Board of Selectmen in matters relating to policies affecting the operation of the Scituate waterways and related activities. The Waterways Commission formulates recommendations for review and approval by the Board of Selectmen.

Waterways Enterprise Fund

The Waterways Enterprise Fund was established by Town Meeting vote in 1995 under the enabling provisions of Massachusetts General Laws Chapter 44, § 53F½. The Enterprise Fund has four major funding sources for regular operations: excise tax, mooring registrations, marina user fees, and town slip fees and tie-up fees. Those who utilize Scituate's waterways pay these fees as follows: Those on moorings pay excise tax and mooring registration; those in private marinas pay excise tax and marina user fees; those at the Town Marinas pay excise tax, slip fees, and user fees.

The Enterprise Fund allows Scituate to account separately for all financial activities associated with a broad range of municipal services related to the Waterways for which a fee is charged in exchange for goods or services. Revenues and expenses of the service are segregated into the Waterways Fund with financial statements separate from all other governmental activities.

Advantages of maintaining a separate Waterways Enterprise Fund include that it:

- Identifies a total service cost – Consolidating direct operating, direct capital, and indirect costs (e.g., enterprise-related costs appropriated in the General Fund operating budget) helps Scituate to readily identify a total service cost and determine funding sources. The total service cost may also include a subsidy from the General or other fund or a reimbursement from the enterprise fund to other funds for subsidized costs incurred in the two full, immediately prior fiscal years.
- Provides useful management information – Consolidating revenues, expenses and operating performance of the Fund provides Scituate with useful decision making information regarding user charges and fees and a subsidy if necessary. The community can also include the enterprise fixed assets and infrastructure as assets and recognize the annual depreciation of these assets in audited financial statements.
- Retains investment income and surplus – All investment earnings and any operating surplus (actual revenues in excess of estimates and appropriations in excess of expenses) are retained in the Enterprise Fund rather than closed to the General Fund at fiscal year-end.

Surplus certified by the Director of Accounts as available is called “retained earnings”. Retained earnings require appropriation by Scituate Town Meeting and have certain other use restrictions.

General

The waterfront is subject to regulatory authority of the local, state, and federal governments. Through its Zoning Bylaw the town regulates uses, density and dimensions of development along the shoreline. It also regulates wetlands through its Wetland Protections Rules and Regulations (Bylaws Section 30770).

The State exercises regulatory authority over the alteration and use of both filled and flowed tidelands under Massachusetts General Laws Chapter 91, the Public Waterways Act. The purpose of this law and the waterways regulations (310 CMR 9.00) adopted to implement the law is to protect the public's interests in the waterways. All existing and new work such as piers, wharves, floats, retaining walls, revetments, pilings, and some waterfront buildings require Chapter 91 authorization.

The federal government, through the U.S. Army Corps of Engineers regulates shorefront activities including dredging and filling in or near coastal waters and structures below the mean high water mark (Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act).

2. Zoning

Scituate's zoning bylaws provide for a Harbor Business district. The Zoning Bylaw notes that the primary purpose of the Harbor Business District is to provide for a more densely-developed business and cultural center for the town, which is served in part by public parking, is accessible by pedestrian travel, and which allows development of businesses that benefit from, as well as contribute to, the well being of Scituate Harbor and waterfront activity. However, the Bylaw does not provide for separate use or dimensional regulations for this district.

The Harbor village is noteworthy because it has a public pier with commercial fishing activity, a hotel, several bed and breakfasts, two large waterfront restaurants serving the tourist industry, several upscale gourmet restaurants, a movie theatre, specialty stores serving visitors, home-decorating items, and a mid-sized, small chain supermarket. The Harbor also has several projects in planning or under construction with 2nd and 3rd floor residential condominiums. This mix of additional retail options over the basic convenience shopping options elsewhere, linked with the stunning location on Scituate Harbor, make the Harbor the primary retail center in Scituate. It is also the only retail center that significantly caters to the tourist trade, with a large number of restaurants and specialty shops. However, it may lack the key employment and/or residential mix to maintain vibrant economic activity year round and in particular outside the tourist season.

Harbor Setback

Section 560 of the Zoning Bylaw provides an option for mixed use development in Scituate Harbor. Section 560.8 requires that in order to protect views of the water that give the harbor its

special character, and to provide a buffer for nearby small scale neighborhood housing, the height of mixed use buildings shall be limited within key setback areas in Scituate Harbor. In Scituate Harbor, within 50' of the water's edge, or within 50' of an adjacent residential Zoning District the maximum height for new mixed use buildings shall be 35'.

3. Chapter 91

Massachusetts' principal tool for protection and promotion of active water-dependent uses of its tideland and other waterways is M.G.L. Chapter 91 (Public Waterways Act, 1866). Chapter 91 and the waterways regulations (310 CMR 9.00) are administered by the Division of Wetlands and Waterways of the Massachusetts Department of Environmental Protection.

The Chapter 91 statute was amended in 1983 with new substantive and procedural requirements in order to ensure that tidelands—both presently flowed and formerly flowed tidelands—are utilized only for water-dependent uses or otherwise serve a proper public purpose. Major revisions of the waterways regulations followed in 1990. Key provisions of those amendments promote water-dependent use of the shoreline; preserve and promote public access; and encourage local involvement in Chapter 91 licensing decisions through municipal harbor plans. A companion set of regulations governing the development and approval of municipal harbor plans was also adopted that same year (see below).

Activities Subject to Chapter 91

Chapter 91 authorization is required for placement of fill, building of structures, and dredging in areas identified above. Types of structures include: piers, wharves, floats, retaining walls, revetments, pilings, bridges, dams, and waterfront buildings (if on filled lands or over the water). A new license also may be required if there has been a structural change or change in use of a previously licensed structure. The placement of temporary rafts, floats or moorings in the waterway do not require a Chapter 91 license, but must receive an annual permit from the Harbormaster under Chapter 91, Section 10A (see Scituate Waterways Bylaws).

In general, uses licensed under the waterways program must either be water-dependent or "serve a proper public purpose which provides greater benefit than detriment to the rights of the public in said lands."

Water-dependent Uses

Water-dependent use is defined in §9.12(2) of the Chapter 91 regulations. In general, a water-dependent use is one that requires direct access to or location in tidal or inland waters, and therefore cannot be located away from said waters. A full definition of water-dependent uses can be found in the regulation. The following is a list of water-dependent uses that are likely to apply to Scituate:

- Marinas, boat basins, channels, storage areas, and other commercial or recreational boating facilities;
- Facilities for fishing, swimming, diving, and other water-based recreational activities;

- Parks, esplanades, boardwalks, and other pedestrian facilities that promote use and enjoyment of the water by the general public and are located at or near the water's edge, including but not limited to any park adjacent to a waterway and created by a public agency;
- Aquariums and other education, research, or training facilities dedicated primarily to marine purposes;
- Aquaculture facilities;
- Beach nourishment;
- Waterborne passenger transportation facilities such as those serving ferries, cruise ships, commuter and excursion boats, and water shuttles and taxis;
- Dredging for navigation channels, boat basins, and other water-dependent purposes and subaqueous disposal of the dredged materials below the low water mark;
- Navigation aids, marine police and fire stations, and other facilities which promote public safety and law enforcement on the waterways;
- Shore protection structures, such as seawalls, bulkheads, revetments, dikes, breakwaters, and any associated fill which are necessary either to protect an existing structure from natural erosion or accretion, or to protect, construct, or expand a water-dependent use;
- Flood, water level, or tidal control facilities;
- Discharge pipes, outfalls, tunnels, and diffuser systems for conveyance of stormwater, wastewater, or other effluents to a receiving waterway;
- Marine terminals and related facilities for the transfer between ship and shore, and the storage of bulk materials or other goods transported in waterborne commerce;
- Facilities associated with commercial passenger vessel operations;
- Commercial fishing and fish processing facilities;
- Boatyards, dry docks, and other facilities related to the construction, serving maintenance, repair, or storage of vessels or other marine structures; and
- Other industrial uses or infrastructure facilities which cannot reasonably be located at an inland site.

4. Municipal Harbor Plans

In September 1990 the Secretary of Environmental Affairs adopted regulations for "Review and Approval of Municipal Harbor Plans" (301 CMR 23.00). The regulations established a voluntary procedure by which municipalities could obtain state approval of a municipal harbor plan.

A municipal harbor plan is defined as a document setting forth the community's objectives, standards, and policies for guiding public and private use of the land and water areas of a harbor and an implementation program to achieve the desired plan.

A plan prepared and approved in accordance with these regulations serves to guide Massachusetts Executive Office of Environmental Affairs ("EOEA") agency actions, including the regulatory decisions of the Department of Environmental Protection under M.G.L. Chapter 91. When an approved harbor plan exists, any project seeking a Chapter 91 permit from DEP must be in conformance with that plan. In essence, a municipality with an approved harbor plan utilizes the state regulatory authority to help implement its own objectives.

Through a stated approved harbor plan, a municipality has the ability to "substitute" local standards for certain state Chapter 91 requirements such as building height limits and to "amplify" certain discretionary state standards in some cases.

The standards that can be substituted by an approved harbor plan apply only to nonwater-dependent uses. Section 9.51(3) establishes minimum standards and limitations on building height, site coverage, waterfront setback, and encroachment into flowed tidelands. Section 9.53(2)(b)-(c) pertains to the provision of interior and exterior public space in a project. Section 9.52(1)(b)(1) is a requirement for a waterfront walkway with a minimum width of 10 feet to be included with any non water-dependent use. In those instances where non water-dependent uses are allowed, this public access requirement exists, as does the ability to modify it through a municipal harbor plan.

The provisions of a municipal harbor plan can also be effective in providing guidance for DEP in applying the numerous discretionary requirements of the Chapter 91 regulations to projects under review.

5. Federal Emergency Management Act Regulations

In Scituate, an initial FEMA identification was conducted in 1986 with the first map issued in June 1986. A complete revision, including changes to base flood elevations and special flood hazard areas, was completed in October 2003, in order to account for the effects of wave action and to change designations. The causes of flooding in Scituate are primarily associated with the coastal areas where the 100-year flood boundary extends inland from the ocean. The study utilized hydrologic and hydraulic analyses to establish Flood Insurance Zones and flood plain management measures for the area. The investigation considered historic flood elevations and estimates of shoreline levels considering stillwater and wave run-up for various frequency storms. The major past storms of the area occurred in October 1991, February 1978, December 1959, August 1954, and September 1938. The February 1978 nor'easter produced water levels higher than any others ever recorded.

The FEMA Flood Zones Map provides a plan of the various Flood Insurance Zones along the harbor as established by this study. The following provides a further description of the zone designation for Special Flood Hazard Areas inundated by the 100-year flood:

- Zone A: No flood elevations determined.
- Zones AE: Base flood elevations determined, and zones subdivided accordingly.
- Zone AH: Flood depths of one to three feet (usually areas of ponding) with base flood elevations determined.
- Zone AO: Flood depths of one to three feet (usually sheet flow on sloping terrain); average depths determined.
- Zone A99: To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.
- Zone V: Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- Zone VE: Coastal flood with velocity hazard (wave action); base flood elevations determined.

6. Waterways Bylaws

The Town of Scituate Mooring Regulations & Waterways Bylaws (Approved June 5, 1979, Most Recently Revised July 2004) govern activities relating to the waterways in Scituate. See Appendix A. Section 30910 of the Town of Scituate General Bylaws also related to the Town waterways.

7. Wetlands Regulations

One of the primary responsibilities of the Scituate Conservation Commission is the administration and enforcement of the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, sec. 40). State Wetlands Regulations at 310 CMR 10.00 serves to clarify and explain provisions of the Act. In addition to the state Wetlands Protection Act, Scituate has a strong local wetlands bylaw, which further protects wetlands and surface waters from potential contamination from point-source discharges, non-point pollution and sedimentation. All of these regulations should continue to be strongly enforced to help maintain high water quality for Scituate's wetlands, surface waters and drinking water reservoirs.

The Scituate Bylaw follows the procedures and requirements of state Wetlands Act. The Conservation Commission has also prepared Applicant Guidelines that provides additional information and explains the purposes and process.

Under the Wetlands Act and the local Bylaw, the Conservation Commission has authority over projects in or affecting five categories of resource areas: bank, beach, dune, flat, marsh, swamp, freshwater or coastal wetlands which border on the ocean or any estuary, creek, river, stream, pond

or lake. The Commission also has jurisdiction for land under water bodies, land subject to tidal action, land subject to coastal storm flowage, and land subject to flooding. Activities within these resources areas subject to jurisdiction include activities that would remove, fill, dredge or alter the resource. The Commission also has the right of review for activities within a 100-foot buffer zone around wetlands bordering water bodies, banks, beaches, and dunes.

8. North River Commission

The North River Commission was established by the Massachusetts Departments of Environmental Management (DEM) pursuant to the Scenic and Recreational Rivers Act, G.L.c.21, s. 17B and the North River Commission Act, c.367, s.62 of the Acts of 1978. The North River Commission has representatives and alternates from each town on the North River: Pembroke, Hanover, Norwell, Marshfield, Hanson, and Scituate. Each town's Board of Selectmen designates its representatives for a term of three years, with no limit to the number of terms a person may serve.

The Protective Order is a set of regulations adopted in 1978 by the Massachusetts Legislature, acknowledging the significance of the North River as a recreational and scenic resource in Massachusetts. To preserve this valuable natural resource, the regulations identify the River Corridor (land subject to protection under the Order) and specify allowed, prohibited, and special permitted uses within the Corridor. The River Corridor includes the North River, its tributaries, headwaters, marshes, and the 300' wide upland area on both sides of the River. The Corridor includes land in Scituate, Marshfield, Norwell, Hanover, Hanson, and Pembroke. These towns are members of the North River Commission (NRC).

The Protective Order restricts use and development of land within the River Corridor. It affords the most protection within 100' of each side of the riverbank, where no new development and virtually no vegetative cutting are allowed. From 100' - 300' from each side of the riverbank, development if it meets specified site design standards. The Protective Order defines uses within the Corridor that are allowed, prohibited, or allowed only by Special Permit.

The NRC carries out the mandates of the Protective Order. The Commission is a division of the Massachusetts Department of Conservation and Recreation (DCR) and is comprised of representatives and alternates designated by the Board of Selectmen in each member town. The Commission meets monthly to review permit requests, to determine if the Protective Order applies to certain uses and activities, and to discuss related issues. Funding from DCR provides support for NRC programs such as river patrols in the summer.

For any dredging projects on the North River, a request of determination of applicability must be filed with the North River Commission. The Commission must make a determination of applicability within 30 days of submittal. If the order is applicable and the project requires a special permit, a public hearing will be held 30 days after application for special permit is received. A decision on the project will be made 30 days after the public hearing. All local permits must be received prior to the Commission taking action.

9. Stellwagen Bank National Marine Sanctuary

The Stellwagen Bank National Marine Sanctuary lies directly off the coast of Scituate and the National Oceanic and Atmospheric Administration's (NOAA) Ocean Service management office

for the Sanctuary is located on First Cliff in Scituate, where the office maintains research vessels. The Sanctuary stretches between Cape Ann and Cape Cod at the mouth of Massachusetts Bay and is virtually the size of the state of Rhode Island. Its boundaries include the submerged lands of Stellwagen Bank, all of Tillies Bank and Basin, and the southern portions of Jeffrey's Ledge. The Sanctuary protects 842-square miles in a topographically diverse area geologists calculate was created some 14,000 years ago during retreat of the last Great Ice Age glaciers.

The National Oceanic and Atmospheric Administration's (NOAA) Ocean Service has managed National Marine Sanctuaries since passage of the Marine Protection, Research and Sanctuaries Act in 1972. Protecting sanctuary resources requires a great deal of planning, management, and cooperation between federal, state, and local officials. The Office of National Marine Sanctuaries works cooperatively with its partners and the public to balance enjoyment and use with long-term conservation. Increasing public awareness of our marine heritage, scientific research, monitoring, exploration, educational programs, and outreach are just a few of the ways the Office of National Marine Sanctuaries fulfills its mission to the American people. The office's staff members are ever mindful of their responsibility to protect America's ocean treasures for this and future generations.

Presently, an updated sanctuary management plan is close to completion. A sanctuary management plan is a site-specific planning and management document that describes the objectives, policies and activities for a sanctuary. Management plans generally outline regulatory goals, describe boundaries, identify staffing and budget needs, set priorities and performance measures for resource protection, research, and education programs. They also guide the development of future management activities.

The Office of National Marine Sanctuaries (ONMS) is required by law to periodically review sanctuary management plans to ensure that sanctuary sites continue to best conserve, protect, and enhance their nationally significant living and cultural resources. Most plans date back to their original designation date and have not been updated. Recent scientific discoveries, advancements in managing marine resources, and new resource management issues may not be addressed in existing plans. The current management plan for the Stellwagen Bank National Marine Sanctuary was released in June 2010.

E. Economic and Management Conditions

1. General

In 2000 Scituate had a year round population of approximately 17,863 residents. During the summer months, population in Scituate increases to 1.4 to two times the winter population. This enormous fluctuation in population mirrors the fluctuation in economic activity, although the year-round population of Scituate has been slowly increasing over the last three decades.

Two recent studies provided extensive information on the local economy, and served as the base references for the Waterways Plan. These are Town of Scituate Master Plan and the Final Report for The Scituate Harbor Village Center Design Charrette.

The relationship of the Waterways Plan to the tourist economy is critical. The tourism industry is inherently water-related, either directly or indirectly. Visitors are drawn to this area because of the water, the beaches, the natural beauty and the unique water-based culture of Scituate. Visitors will

come as long as facilities for enjoying these assets are available and functioning well.

The number of visitors that can be accommodated in Scituate is restricted by the capacity of the basic transportation and circulation systems, which are unlikely to be expanded in the near future. Daily visitor levels are heavily influenced by the weather. Poor weather in the summer season results in large influxes of visitors, who are less attracted to beach visits or other activities. Any expansion of tourism will be the result of increased competitiveness for "fair weather" visits, and the expansion of visits into the shoulder seasons.

Generally stated, the economic patterns are stable and will be most affected by underlying changes in the regional economy or in changes in the resources and attractions that lead visitors to Scituate.

2. Scituate Fishing Industry

The Scituate fishing port is the largest on the South Shore. The fleet is comprised of large draggers, gill netters and lobstermen. The commercial fishing industry remains strong and supports over 100 families alone. Commercial fisheries are dependent on Scituate Harbor and make a significant contribution to the economy. The Harbor provides a quick access to the fishing grounds and fish buyers.

There are sixty to sixty-five commercial fishing vessels in Scituate. The bulk of the commercial fleet is made up of 46 lobster boats on moorings. Fifteen ground fish vessels tie up at the Town Pier. There are also eleven private marinas in Scituate.

In Scituate Harbor, the Town operates the Cole Parkway Marina and the Scituate Marine Park marina, the Town Pier, and administers the mooring field. The fishermen maintain a public landing for the lobster fleet. Land was donated on condition that fishermen would be allowed to use it as they always have (the covenant has been lost however).

The Town maintains three launching ramps for which no user fees are charged. However, one is a Massachusetts Office of Fishing and Boating Access ramp and cannot be used for commercial vessels unless permitted by the Harbormaster. Furthermore, the town ramp is unusable except at high tide. The Driftway Park ramp is a dirt ramp that can accommodate only small boats.

The Town Pier is exclusively used for the commercial fishing fleet. In addition to the ground fish vessels that are docked at the facility, the entire fishing fleet uses the facility for loading and unloading of supplies and bait. Fuel is trucked to the pier. Trucks utilize the pier for the receipt and transportation of fish to various dealers and processors. Lobster bait is delivered by truck to the Town Pier. Fishermen who pay for dockage at the Town Pier are permitted one parking space on the pier for their own personal vehicle. There are no fees charged for parking vehicles in the municipal parking lot that is about a block away from the Town Pier.

The lobster fleet utilizes a dedicated landing located at the western end of the Cole Parkway Lot, known as the Lucien Rousseau Memorial Landing, for their general access. The lobstermen created this landing utilizing used surplus marina floats donated by the Harbormaster. There is a noticeable lack of water depth at low tide.

The general condition of the Town Pier is run down. There are noticeable deficiencies in the electrical shore power supply to the vessels. The system in place now may be out of compliance with accepted electrical standards. The pier fendering system has degraded to the point where it is at the end of its useful life expectancy. The pier is heavily used. It is the only deep-water facility in town. When the ground fish fleet is preparing to depart in the morning, the lobster fleet is competing for the same space to load bait, and supplies. One prior suggestion to relieve this pressure was to dredge the area around the Lucien Rousseau Memorial Landing, and perhaps construct a bulkhead there to allow easier loading and unloading of the lobster boats.

At one time there was an ice-making machine located on the pier, but it was abandoned as there were not enough vessels utilizing the service and accounts payable grew out of hand. Ice is now trucked in from New Bedford or Gloucester. Ice is a major problem in Scituate, as it appears to be in most of the fishing ports in the Commonwealth.

Shellfishing

Scituate's prime shellfish beds for soft-shell clams and mussels include the South River, the North River and Briggs' Harbor and Bassin's Beach in Cohasset Harbor. Surf clams, less popular for harvesting, are available along the shoreline from the Glades to Third Cliff. At one time Briggs' Harbor had a vast resource of soft-shelled clams and mussels, that has since been depleted. This area presently is closed to allow shellfish to regenerate. The North River is another productive area for soft shell clams, razor clams and sea worms. Quahogs can be found only in small tributaries of the North River and in a small area of the South River.

The Division of Marine Fisheries periodically surveys shellfishing resources to determine water quality and whether shellfishing should be allowed. While contamination is responsible for the permanent or periodic closing of shellfish areas, the state's readings may be infrequent and may not reflect recent improvements in water quality. This circumstance makes it difficult to reopen shellfishing areas in a timely way.

Shellfishing in Scituate Harbor and the South River has long been prohibited due to unsatisfactory water quality. Some of the problem in the South River is most likely due to a lack of sewerage in Marshfield. Sewerage of downtown Marshfield has recently been implemented, and hopefully this will improve water quality in the South River.

The water quality of the North River has improved substantially over the past several years, and efforts are continuing to identify remaining sources of contamination. This system is complex, with heavily traveled roads, businesses and other land uses upstream, as well as wildlife, contributing Coliform bacteria to the river's waters.

Scituate's shellfish resources are abundant, but their use is limited by poor water quality in the North and South Rivers. Improvements at Scituate's Wastewater Treatment Plant have proved very productive for soft shell clams as for the last 10 years many flats have been open for shellfishing from January 1 to June 30. The Town has worked hard to upgrade the Wastewater Treatment Plant, and is attempting to identify other sources of fecal Coliform that could affect shellfish beds. The Town should pursue the reopening of these historically productive areas for year-round use.

No commercial shellfish permits are issued. Recreational permits are available through the Town Clerks' office which permits generally are good for one year. Shellfish beds in the North River have been the only beds opened in the recent past. Typically the shellfish beds are open from December to April 1st. This license allows the harvest of one 8-quart bucket of clams per week, the clams being either soft- or hard-shelled. Mussels and periwinkles may be harvested pursuant to the Town shellfish regulations.

In 2007, the Harbormaster's Office, in conjunction with the Town of Marshfield, started a seeding program for the area between the mouth of the River and Damon's Point and it is expected this activity will continue in the future.

3. Boat Repair and Maintenance

Boat repair and maintenance activities are severely limited by the availability of facilities. The characteristics of Scituate Harbor support the contention that this activity could be expanded. However, a substantial increase in the scale of operations must occur if meaningful expansion of employment and income are to occur. The Town owned Scituate Marine Park leases a boatyard operation that is able to accommodate the repair of most recreational and commercial boats in the harbor.

4. Scituate Town Pier

Owned and managed by the town, Scituate Town Pier serves as the focus of activity on the Harbor. The management of the Pier is a responsibility of the Harbormaster's Office. The uses on the Pier have been noted elsewhere in this report, and include the economic activities of commercial fishing facilities and a dinghy dock.

Despite its importance to the regional and local economy, the operation of Scituate Town Pier is not currently self-supporting. The aging structure requires immediate repairs to simply maintain current operational levels at the Pier.

5. Marine Trades

A 2005 Massachusetts Marine Trades Workforce Assessment Survey prepared by the Urban Harbors Institute in collaboration with the South Coastal Workforce Investment Board Massachusetts Marine Trades Association and Massasoit Community College identified that the marine businesses in the South Coastal region of Massachusetts are currently unable to grow due to a severe lack of qualified technicians. On average, there appears to be current need for approximately 1.5 more technicians per business and this un-met demand is expected to grow in the future.

Qualified technician positions are well paid and this means that there are significant employment opportunities in the area for personnel with the relevant marine trade skills. Marine industry employers are keen to support their employees in efforts to gain further qualifications that may lead them to becoming a Master Technician. However, the fact that many of these companies are small means that it is not always possible to support further training as the remaining employees would not be able to deal with the excessive workload.

Currently, much of the training is offered out of state, which means that employees must be absent for significant periods of time. Such periods of time could be greatly reduced if educational centers were to be established within Massachusetts. Such center could offer courses in a number of marine trade skills and use on-site, classroom / workshop teaching methods. The establishment of such centers would encourage employers to assist their employees in gaining further qualifications and would also help to attract other people into the marine industry.

A Waterways Plan might endorse the recommendations of the Massachusetts Marine Trades Workforce Assessment Survey in respect to Scituate by pursuing the development of apprenticeship programs for the marine trades as a way to bridge the gap between classroom education and a fully developed career path thereby expediting advancement, wages, employers return on training investments, and providing more experienced employees for marine trades businesses; and to support and promote vocational marine trade courses and to work to establish educational centers in Scituate that offer training in a number of marine trades. Such training should be geared to meet the limitations on when employees may be available and to structure courses in a manner that will attract more students.

F. Summary of Key Issues Based on Findings

As noted in the introduction to this Existing Conditions Report, the findings of existing conditions are to be used in part to establish key issues that required both study and resolution as part of the master planning process called for in the Waterways Plan. The issues identified below are arranged according to the Major Topic Areas for consideration in assessing the scope of a Waterways Plan.

Key Issues in Preserving the Harbor's Built and Natural Assets

Scituate Town Pier

- Provide a program for regular maintenance.
- Establish funds for necessary capital improvements.
- Establish a source for operational costs.
- Provide adequate load capacity for multiple truck use and heavy loads.
- Improve the docking configuration.
- Provide for fish unloading and packaging operations.
- Resolve peak season vehicle and pedestrian conflicts.
- Provide adequate berthing for all needs.
- Establish improved management approach.
- Provide for expanded utilization.

Navigation

- Regularly maintain sufficient harbor depths in some locations.
- Regularly dredge navigable channels.
- Consider configuring harbor depth and boat ramp at Cole Parkway.
- Regularly maintain protection of the harbor by breakwaters.

Beaches

- Address concerns regarding beach stability and erosion patterns.
- Find solutions for land-generated trash and debris.
- Find solutions for waterside-generated trash and debris.
- Address 4th Cliff erosion control issues.

Water Quality

- Protect and improve water quality in the harbor
- Coordinate with appropriate town agencies responsible for stormwater management and enforcement of septic system regulations.

Key Issues in Promoting Commercial Fishing

Commercial Fishing Needs

- Take note of federal and state regulations relating to limitations on commercial fishing.
- Address problems associated with declining fishing stocks.
- Enhance shoreside facility support for existing commercial fishing needs.
- Provide flexibility for changes in the commercial fishing industry.
- Chartered sport fishing boats are growing in popularity. This is seen as a burgeoning industry that could stimulate other sectors of the economy. Future infrastructure needs should be considered to support chartered sport fishing.

Aquaculture

- Support the existing shellfish seeding program.

Key Issues in Providing for Diverse Vessel Use and Needs

Management

- Reduce conflicts among competing vessel use needs.
- Provide for diverse vessel uses.
- Provide for improved funding of management functions.
- Provide for the imbalance between non-resident seasonal use and town provision of services.

Recreational Boating Needs

- Provide support facilities for transient boaters (showers, laundry, provisions).
- Provide support for adequate launch service.
- Improve boat ramp access.
- Provide adequate dinghy dock for all of its potential users.

Commercial Boating Needs

- Provide appropriate moorage and berthing locations to support operational needs.
- Improve boat ramp access.
- Improve commercial support facilities.
- Improve access to and adequacy of the dinghy docks.
- Provide haul out and vessel maintenance services.

Assuring Public Access to the Shoreline for Recreation

- Increase public access and enhance existing facilities to provide for greater enjoyment of the waterfront.
- Provide access for boat-related recreational uses.
- Provide access for beach use.
- Provide shore and waterside signage indicating town landings.
- Provide parks and walkways for pedestrian access.
- Provide sufficient parking at all related public facilities.

Key Issues in Planning for Future Harbor Uses

Land Use

- Explore compliance of existing properties with current Chapter 91 regulations.
- Resolve problems associated with a lack of Chapter 91 licenses for any properties where these are required.
- With public input, determine appropriate uses for the water's edge.
- Determine appropriateness of current zoning for harbor edge uses.
- Encourage water dependent uses through zoning and other guidelines.

Water Use

- Determine location and extent of moorings.
- Improve management of moorings, including anchorage systems.
- Resolve conflicts between mooring fields, slip locations and commercial activities.

IV. Summary of Planning Alternatives

A. Purpose of the Waterways Planning Alternatives

In the course of preparing the management plan for Scituate Harbor, three alternatives for the harbor's future were developed, each according to a theme with substantially different public policy implications. Each alternative was evaluated thoroughly according to a comprehensive set of impact criteria. Members of the Waterways Planning Sub-Committee, the Waterways Commission, and representatives of numerous interest groups and town committees were actively involved in the process of studying these alternatives. In many ways the final proposal represents a

composite which maximizes the best aspects of the alternatives studied and eliminates the least useful.

The alternatives were specifically constructed to respond to the five issue categories that served as the focus of the planning process:

- Issue Area 1: Preserving the Harbor's Built and Natural Assets
- Issue Area 2: Promoting Commercial Fishing and Aquaculture
- Issue Area 3: Providing for Diverse Vessel Use and Needs
- Issue Area 4: Assuring Public Access to the Shoreline for Recreation
- Issue Area 5: Planning for Future Harbor Uses

The first alternative, "Improve the Existing Conditions," suggests that Scituate Harbor should be improved through incremental actions to correct existing deficiencies, but does not suggest that there be any significant changes in the pattern or amount of uses that occur within the harbor area.

The second alternative, "Encourage Waterside Potential," is focused on better supporting the water orientation of existing and potential uses. This alternative suggests that priorities be established to encourage substantially reorganized and improved facilities and resources for commercial and recreational use of the harbor and the land beneath its waters.

"Encourage Landside Potential," the third alternative recognizes the special relationship of the harbor to the land-side uses that have evolved in Scituate and seeks to promote the potential to further support these uses. This alternative explicitly recognizes the importance of tourism to the local economy, and the reliance on an attractive and usable waterfront and harbor. This alternative tends to emphasize public access to the waterfront and water-related uses and recognizes the beach and shoreside as a general public amenity.

Included in the evaluation of each alternative was a detailed assessment of its impacts on Scituate and its harbor. The categories of evaluation included:

- Environmental impacts
- Physical impacts (changes in existing land and water conditions)
- Economic impacts (cost implications and economic benefit potential)
- Management implications (need for additional management of activities or resources)
- Change in the social and historical context of Scituate Harbor
- Regulatory implications (need for changes in the existing regulatory context)

B. Summary of the Waterways Planning Alternatives

1. Alternative 1: Improve the Existing Conditions

The first alternative is premised on the belief that there are many constituencies and public interests that are currently well-served by the uses of the harbor and its surroundings. It calls for measures to correct existing deficiencies, but does not propose to rearrange or expand any existing use or to introduce new uses.

Alternative 1: Preserving the Harbor's Built and Natural Assets

The first alternative calls for the reconstruction of the Town Pier to the extent necessary to maintain existing operations effectively, as the existing pier is in poor condition. Alterations would occur to better serve the small boat commercial fishing fleet. However, rather than seeking a major reconfiguration, an altered program would include construction of a new and permanent improvements to better accommodate the needs of this existing use.

Under this alternative, a regular dredge maintenance program would be established for areas outside of the Federal Channel. As an aid to navigation, the town would maintain strict programs to keep all moorings and slips outside of the Federal Channel areas.

This alternative proposes to improve the existing appearance and accessibility of the beaches without significantly encouraging or altering the existing uses. This alternative recognizes that the majority of the Scituate beaches are used for sunbathing and occasional swimming and for strolling. A management program, administered by the town, would involve the implementation of a number of improvements, including management measures to improve waste collection and disposal.

In the interest of improving water quality in Scituate Harbor, the town would maintain and enforce boat pump-out programs. Scituate Harbor's pump-out facilities should be enhanced and improved. A funding mechanism needs to be worked-out to support operations and maintenance once grant moneys are no longer available.

This alternative would also require the town to continue to support and participate in the Scituate Harbor Water Quality Monitoring Program and other relevant programs.

Alternative 1: Promoting Commercial Fishing and Aquaculture

This alternative does not envision any substantial expansion of facilities for commercial fishing within the harbor. Nevertheless, the changing market, regulatory conditions and the existing inadequacies would lead to a series of recommended improvements. Given the current situation and likely future trends, this alternative envisions a modest expansion in existing docking facilities for the mid- to large-sized boats, and the allocation of convenient mooring spaces for commercial fishing.

To redress current inadequacies, this alternative would provide substantially improved facilities for the small boat fishermen at ramp locations. In addition, this alternative would include proper facilities for trailers.

This alternative would continue and, perhaps, expand the artificial propagation (seeding) of public shellfish areas by the Harbormaster's Office. This alternative would seek methods to increase to past levels the number of days per week shellfishing is allowed.

Alternative 1: Providing for Diverse Vessel Use and Needs

This alternative would not alter the fundamental management structure of Town Pier or of the harbor. The Harbormaster's Office would be equipped with additional management tools, reporting responsibilities and budgeting procedures to allow for improved oversight of harbor activities for all structures.

Recreational boating needs would primarily be improved by improving the town boat ramps and dredging channels where necessary to increase the usefulness of the ramps. The actions taken under this alternative for commercial boating needs are largely addressed under other issue areas.

Alternative 1: Assuring Public Access to the Shoreline for Recreation

Under this alternative, the town would create a master planned approach to public access along, and to, the waterfront. The Harbormaster and the Waterways Commission would actively work with the Town Planner and Planning Board to obtain public input, identify funding and implement improvement. While it is recognized that in some cases it is possible to obtain additional public access through compliance of individual properties to Chapter 91, in Scituate's case this alternative has been thoroughly explored through the 1999 Coastal Access Plan. The current system of individual compliance to Chapter 91 guidelines would be continued.

Alternative 1: Planning for Future Harbor Uses

Under this alternative, no significant changes in land use would be proposed. As has been noted elsewhere, landside marine support would be improved through a number of measures.

This alternative would provide for improved management of moorings based on the mapping and review of mooring conditions and would reorganize mooring locations to heighten efficiency.

2. Alternative 2: Encourage Waterside Potential

The second planning alternative sees the harbor as an essential and underutilized asset for commercial and recreational use. As such, it calls for increased access to and from the harbor and maximum commercial opportunities within the harbor waters and along its bottom. This alternative recognizes that there may be conflicts between landside uses and water-related uses and would establish a consistent priority for water-dependent uses whenever such conflicts might arise. It further suggests a concentration of public policy and public expenditures on water-dependent uses of the harbor and its surroundings.

Below alternative 2 is summarized according to the five key issue areas.

Alternative 2: Preserving the Harbor's Built and Natural Assets

This alternative would renovate the Town Pier to better accommodate fishing and berthing, off-loading and packing. The pier would be modernized to allow for expanded utilization. This alternative also calls for a maintenance dredging program to improve navigation safety and the mooring conditions in the harbor and rivers.

The program for beach maintenance and improvement would be generally the same as in Alternative 1. Water quality actions would generally be the same as those described in Alternative 1, as well. However, implementation of a targeted water quality monitoring program associated with the expansion of shellfishing would also be included as part of this alternative.

Alternative 2: Promoting Commercial Fishing and Aquaculture

Under this alternative, a proactive effort would be initiated to support commercial fishing of all types. This alternative would also provide for additional value-added activities to maximize the support of the local fleet.

Alternative 2 would make a number of specific actions aimed at expanding and upgrading shellfish habitats as well as increasing the types of shellfish grown. This alternative would support both landside and waterside facilities for aquaculture or mariculture.

Alternative 2: Providing for Diverse Vessel Use and Needs

Alternative 2's expansion of commercial fishing and aquaculture would require an administrative group specifically charged with attracting grants, studies, loans, and administering harbor resources. This would most likely represent an expansion in role for the Harbormaster's Office. Recreational boating would be better accommodated with an expansion of the protected harbor through breakwater maintenance, possible expansion of mooring fields that would be associated with dredging programs, and improvements to the town boat ramps. Programs and infrastructure that support sport fishing would be encouraged.

Major steps would be taken to support commercial boating needs under this alternative.

Alternative 2: Assuring Public Access to the Shoreline for Recreation

The extent of waterfront in Scituate presents a unique opportunity to develop and implement a comprehensive and coherent plan for optimum utilization of opportunities for greater access, including the harbor front, along the waterfront and for improving water-dependent activities. This plan would be implemented through two mechanisms:

- Creation of a dedicated fund to create access improvements, funded by payments from properties which cannot satisfactorily provide on-site compliance with the Chapter 91 standards as part of the licensing process.

- Coordinated implementation of on-site improvements through a master planned approach.

The adopted Scituate Waterways Plan will serve to guide and coordinate state (Chapter 91) and local (Zoning Bylaws, Wetlands Bylaw, etc.) decision-making to achieve the mutual goals of the state and municipality as reflected in the Town Master Plan.

Alternative 2: Planning for Future Harbor Uses

This alternative would take pro-active steps to increase the supply of waterfront land to support water-related uses.

Mooring areas would be expanded, and additional mooring location preferences would be given to commercial vessels. A rationalized mooring and anchorage system would also be recommended to increase safety and efficiency and to minimize management requirements.

As has been described, improved boat ramps would be provided as part of this alternative.

3. Alternative 3: Encourage Landside Potential

The third planning alternative sees the harbor as the focus of the town and the many land-side uses that have evolved. This alternative explicitly recognizes that the local economy is strongly linked to tourism and that the harbor and its edge are fundamental assets which could be better protected and enhanced. While water-dependent uses are encouraged, the emphasis is in relation to their support of land-side uses and the economy.

Alternative 3: Preserving the Harbor's Built and Natural Assets

Beach maintenance and access efforts would be the same as those listed in Alternatives 1 and 2. A number of public improvements such as decks, promenades, boardwalks, look-outs and the like could be programmed for this area.

The same actions as those listed in Alternative 1 would be taken to help assure water quality.

Alternative 3: Promoting Commercial Fishing and Aquaculture

Aquaculture actions and policies would be the same as those in Alternative 1, which envisions some systematic improvements in the existing circumstances but does not seek to dramatically change or expand the resource or its harvesting.

Alternative 3: Providing for Diverse Vessel Use and Needs

Alternative 3 would seek to maximize the private sector development and management of tourism-related marine facilities to the greatest extent practical and financially beneficial to the town. Feasibility of this management approach would be needed to be studied, to assess the relative costs and benefits to the town.

Alternative 3 would seek to maximize the public and private sector development and support of marine trades to the greatest extent practical and financially beneficial to the town. Feasibility of this management approach would be needed to be studied, to assess the relative costs and benefits to the town.

This alternative would propose the creation of improved boat ramps, virtually identical to that proposed under Alternative 2.

Alternative 3: Assuring Public Access to the Shoreline for Recreation

This alternative would take a similar approach to increasing public access as Alternative 2, and would use this process as a principal mechanism to assure improved public access to the waterfront for recreation. Under this approach, the adopted Scituate Waterways Plan will serve to guide and coordinate state (Chapter 91) and local (Zoning Bylaw, Wetlands Bylaw, etc.) decision-making to achieve the mutual goals of the state and municipality for waterfront access as reflected in the plan.

Alternative 3: Planning for Future Harbor Uses

As in Alternative 1, this alternative would seek to alter all adjustable Chapter 91 requirements for consistency with existing land use. Landside marine support would be identical to that in Alternative 2, with the exception that efforts would be undertaken to increase the capacity for boatyards, storage and repair in Scituate in appropriate locations.

The expansion of mooring fields is very similar to that presented under Alternative 1, although the layout, location, assignment and management would be oriented to support and encourage recreational boating use of the harbor as its highest priority.

In general, the locations, systems and cost options would be similar to those described under Alternative 2.

C. Conclusions of the Alternatives Phase

As noted in the introduction to this section, the Waterways Planning Alternatives were utilized to explore several potential directions for the future of Scituate Harbor. The reviews of the alternatives included a workshop, a public forum, and several meetings of the Waterways Planning Sub-Committee. The directions chosen by the Waterways Planning Sub-Committee were assembled from those elements of each of the alternatives that received favorable technical and public evaluation and which best represented the Goals and Objectives for the Waterways Plan.

V. Planning Recommendations

This section of the Scituate Waterways Plan is comprised of a series of both general and specific planning recommendations. The recommendations reflect the strengths of the planning alternatives studied and respond to current conditions at Scituate Harbor as well as the directions of the town's citizens as expressed in public meetings and through the Waterways Planning Sub-Committee. The recommendations address issues of Land Use, such as use patterns, environmental impacts of various land uses, and the Harbor beaches. Under a general heading of Water Use, the

recommendations discuss different kinds of fishing, boating and navigation, as well as water quality. A discussion of Public Facilities focuses on the publicly-owned land and facilities, such as the Town Pier, Scituate Marine Park, Cole Parkway Marina, and Driftway Park. An entire section is also devoted to recommendations concerning M.G.L. Chapter 91 and its regulations.

The recommendations also take into account Long Term Plans for the Harbor, as well as a series of recommended actions for water access. But, to be truly useful, a Plan needs not only to discuss what should be done, but also how a community can take steps to make it happen. Thus, these recommendations also include a section on Implementation, which describes a series of Harbor Management Roles and Responsibilities, such as the Harbormaster's Office, the Waterways Commission and a Harbor Access Trust, as well as Chapter 91 Implementation.

General recommendations of this Plan have been translated into actions that should be taken to accomplish its goals and objectives. Key actions have been summarized at the end of each of the following sections to facilitate review and understanding.

A. Land Use

1. Land Use Patterns

In general, the Scituate Waterways Plan accepts the existing land use patterns along the water's edge as appropriate for the future of the community. The Plan acknowledges that the mixture of retail, commercial, residential and civic uses that fill most of the waterfront properties should be retained as a vital and appropriate mix. Because the Harbor Business zoning district allows a broad range of uses, including tourist-related commercial uses such as retail, hotels, and restaurants, the market exerts strong economic forces. Typically, in this situation, it is economically difficult for water-dependent uses to compete for available land. At the same time, the Waterways Plan seeks to protect and extend the role of water-dependent uses along the waterfront and enhance views and access to the waterfront where possible.

The Waterways Plan does not recommend any significant changes for any of the zones within the Waterways Planning Area. As the discussion of existing conditions makes clear, the existing zoning for this area is consistently more restrictive in terms of dimensional requirements than the pattern of existing development. The pattern and density of development of the downtown was established decades ago. As in many towns similar to Scituate, minor modifications over time often are not in keeping with the spirit of the underlying zoning regulations, nor with the goals and objectives of this Plan. Narrowing the list of allowed uses (to only those that are water-dependent, for example) or further restricting dimensional standards will increase the amount of legally nonconforming properties and offer little incentive to redevelop the property in conformity with the Bylaws.

To reinforce the underlying goals of the existing zoning and the conclusions of this Plan, its goals, objectives, and recommendations should be incorporated in the Zoning Bylaw where appropriate. For example, by providing incentives for:

- Use which do not displace or diminish an existing water-dependent use.
- Uses which are part of and complements a water-dependent use on the same parcel.

- Uses compatible with surrounding water-dependent uses and the waterfront character of the area.

The purpose is to make the local Bylaws related to use of the harbor front area as consistent as possible with the objectives of this Plan and in locations where they apply, with the Chapter 91 regulations. This should improve consistency of regulatory decisions and simplify the development approval process.

The Scituate Waterways Plan has several recommendations in regard to water-dependent uses. The first is to protect and maintain existing water-dependent uses. This objective is a primary concern in the area of the waterfront that retains the greatest concentration of water-dependent uses. The second recommendation is to ensure that new nonwater-dependent development does not impede or interfere with the operations or viability of water-dependent uses. The third is to encourage new water-dependent facilities whenever appropriate in response to expressed need. The fourth recommendation is to increase public access to the waterfront wherever possible.

This Plan includes a detailed local approach to the review and licensing of properties within Chapter 91 jurisdiction. This is an important land use tool, and has been described in detail in a separate discussion below. In addition, the Waterways Plan includes detailed recommendations for direct public improvements through investments, enhancements, and expenditures through a dedicated fund for water access improvements that is also detailed below.

The Town may wish to pursue additional proactive measures regarding water-dependent uses along the waterfront. In this regard, it is recommended that a working committee be established with representatives from both the proposed Waterways Commission and the Planning Board to consider additional planning mechanisms to protect and extend water-dependent uses along the waterfront.

The working committee may wish to consider the following mechanisms as part of its considerations. These zoning mechanisms represent various strategies for encouraging and maintaining desired development that have been implemented in other coastal communities and may provide a potential model for Scituate. In waterfront areas subject to Chapter 91 jurisdiction, all of these local zoning strategies would complement and bolster the Chapter 91 program objectives.

- Create an exclusive water-dependent use district. Such a strategy might be particularly appropriate for the area which contains the highest concentration of water-dependent uses.
- Keep the existing zoning but include criteria to protect and promote water-dependent uses from new development, changes of uses, or modification of uses.
- Prevent interference with existing water-dependent uses through appropriate regulation. An example of interference would be a use that diminishes public and working access to the beach. In another case, the development of certain types of non water-dependent uses, such as a new residence on an adjacent property, might create a conflict with a boat repair facility. In certain cases, and as compatible with private property rights, the zoning regulations could include a provision recognizing such a potential incompatibility and

discouraging a particular type of use from being established near existing water-dependent uses.

- Prevent reduction of waterfront capacity to accommodate present and future water-dependent uses. Long-term impacts of new development on water-dependent uses should be considered when reviewing permit applications.
- Increase public access whenever appropriate. The local Bylaws should reflect the objectives for the waterfront articulated in this Waterways plan.
- Explore the potential of economic development areas utilizing special tax and other advantages, such as Business Improvement Districts and similar programs by utilizing mechanisms and potential resources from state programs.

2. FEMA Velocity Zones

As noted in the existing conditions evaluation, there are numerous properties along the Scituate waterfront that include improvements within "velocity zones" as designated by the Federal Emergency Management Administration. These improvements are at risk in the event of extreme storm conditions. This affects the ability to insure properties, including the availability and the cost of insurance.

It is recommended that the town continue to seek funds from FEMA and/or its Massachusetts equivalent (MEMA) for assisting the elevation of existing homes and protection of protective infrastructure such as seawalls to reduce storm damage risks to existing improvements in FEMA velocity zones. This ongoing study should investigate the potential for providing engineered improvements such as beach extensions associated with dredging program, sacrificial dunes, or other measures to remove the velocity zone designation from affected properties.

3. Stormwater Management in Scituate Harbor

Stormwater is a significant source of land-based pollutants to the harbor. The Plan reinforces the existing town policies towards protection of the harbor as an environmentally sensitive location. The Waterways Plan recognizes the importance of the current program to correct water pollution problems due to drainage outfalls, poor stormwater management and poorly performing septic systems. The Waterways Plan recommends proactive involvement of the town in programs to monitor water quality issues and to pursue corrective measures to ensure high water quality.

A program should be established to eliminate storm water outfalls from the harbor, and the planning effort should include representatives from the Waterways Commission. Limiting the flow from outfall pipes is a complex and costly issue. However, more frequent cleaning and installation of appropriate devices on catch basins to reduce the pollutant load would be a cost-effective strategy to reduce the flow of pollutants debris from outfall pipes on the short run. In addition, the Town should continue efforts to utilize Low Impact Development techniques to reduce the amount of pavement and impervious surface within the watershed to coastal waters.

In 2009, Scituate passed a stormwater bylaw, the purpose of which is to reduce flooding, protect water quality, increase groundwater recharge, reduce erosion and sedimentation, promote environmentally sensitive site design practices that protect vegetation and enhance town character, ensure long-term maintenance of stormwater controls and meet federal requirements under Phase II of the National Pollutant Discharge Elimination System. The bylaw applies to the following activities: All development and redevelopment projects that will disturb or alter over 15,000 sq. ft. of land, any development of an undeveloped parcel that will increase stormwater runoff, or a net increase of 25% or more of impervious area even if that alteration is conducted over separate phases and/or by separate owners; All development and redevelopment projects that will disturb or alter over 1,000 square feet of land on slopes greater than 15%, even if that alteration is conducted over separate phases and/or by separate owners; Construction of a new drainage system or alteration of a drainage system, serving a drainage area of more than 15,000 sq. ft. of land; Any development or redevelopment involving “land uses with higher potential pollutant loads,” as defined in the Massachusetts Stormwater Standards, Volume 1, Stormwater Policy Handbook. Land uses with higher potential pollutant loads include auto salvage yards, auto fueling facilities (gas stations), fleet storage yards, high-intensity commercial parking lots, road salt storage areas, commercial nurseries, outdoor storage and loading areas of hazardous substances, and marinas.

4. Barrier Beaches

Barrier beaches are narrow, low-lying strips of land generally consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast. They are separated from the mainland by a relatively narrow body of fresh, brackish or saline water, or by a salt marsh system. A barrier beach may be joined at the mainland at one or both ends. Scituate's barrier beaches are listed in CZM's Barrier Beach Inventory Report with a total of 323.1 acres (Hankin et. al, 1985). The Humarock/Rexhame barrier beach is the sixteenth largest barrier beach landform in Massachusetts and is attached to the mainland at the southern end. Scituate's barrier beaches are illustrated on the Recreation Facilities map found at the end of the Open Space and Recreation element of the Town Master Plan. They include:

- Strawberry Point
- Minot Beach from gate to 300' south of Bailey's Causeway
- North Scituate Beach from Mitchell Ave. to Mann Hill Beach
- Mann Hill Beach from North Scituate Beach to Egypt Beach
- Egypt Beach from Mann Hill Beach to Bradford Ave.
- Shore Acres/Sand Hill Beach from Seventh Ave. to the southerly end of Rebecca Road
- The Beach along Edward Foster Road between First and Second Cliffs
- Peggotty Beach
- The Sand Spit (Rivermoor)
- Humarock Beach except Fourth Cliff

Coastal erosion is a natural process, where wind and waves continuously transport sediment along the shoreline. Barrier beaches help protect inland areas from the subsequent erosion, but are also subject to its effects. Erosion of beaches has been occurring along the coastline of Scituate at an average rate of approximately one foot a year. In the past 50 years, large sums of public and private money have been spent to erect seawalls and build revetments to protect the Cliffs and

other shorefronts from erosion. The Cliffs are actually marine scarps formed by the erosion of drumlins. The base of the Cliffs has been protected with heavy blocks of granite in several locations. The armoring of the Cliffs has temporarily reduced the erosion of the scarps. In the past, this eroded material served to nourish Peggotty Beach and other adjacent barrier beaches. With the loss of nourishment, these beaches are receding at an increasing rate. Photographs taken at the turn of the century show that the beaches then were much more extensive than they are today.

Storm damage prevention and flood control are two of the most important values of the barrier beaches. The sands of a barrier beach can absorb the force of storm waves, and the reshaping of beaches and dunes by waves provides material to beaches down-current and eases the effects of erosion. In Scituate, long stretches of barrier beaches have been extensively developed, increasing the potential for flood damage as well as erosion.

Coastal storm flooding has historically caused significant damage to Scituate homes which front directly on the water. An extremely severe coastal storm, the Portland Gale of 1898 created a breach in Scituate's southernmost barrier beach, with the result that Humarock became separated and has remained isolated from the remainder of the Town ever since. During the past ten years, there have been several intense coastal storms on the South Shore, including severe northeasters in 1991 and 1992 which were accompanied by significant coastal erosion and storm flooding in Scituate.

Statistics from the Department of Environmental Management indicate that Scituate has had a very high volume of insurance claims for flood losses. From 1978 to 1998, 2,379 claims were filed by Scituate residents, totaling \$45,000,000, a significant percent of the state's total losses of \$204,000,000 during the same period. Over the past decade Scituate has made many efforts to encourage flood-resistant construction and stem repetitive loss claims. The Town requires major new construction in the flood plain to be elevated to one foot above the minimum base flood elevation, and has strictly enforced this standard. Because of the vulnerability of development in waterfront locations, the Town should continue this policy.

Scituate participates in the Community Rating System (CRS) program administered through the National Flood Insurance Program, which offers a reduction in flood insurance rates to municipalities that provide education about flood proofing and require flood-resistant building techniques. The Town has also obtained grants from FEMA through the Hazard Mitigation Gram Program, Flood Mitigation Assistance Program and Severe Repetitive Loss Program to help homeowners pay for elevating their dwellings and raising utilities so they are protected from flooding.

Approximately 30% of the Town's land, or 3,279 acres, lies within the Flood Plain and Watershed Protection Zoning District. Within this Town overlay District, a Special Permit is required for major additions and renovations to existing homes. New construction can only be allowed if a property owner can show his land is not subject to flooding.

Although large sections of Scituate's barrier beaches are already extensively developed, they continue to provide excellent protection against flooding of more inland areas. They remain fragile and prone to erosion, and new building in these locations should be avoided to the greatest extent possible. It is important for the Town to continue its strong enforcement of local, state and federal

building codes to make sure any improvements on the barrier beaches are able to withstand flooding to the greatest extent possible.

Beach nourishment

Beach nourishment guidelines have been developed by the Massachusetts Coastal Zone Management Office and Department of Environmental Protection. The guidelines suggest that an understanding of several physical and ecological conditions of an area form the basis for decision-making. These include knowledge of (1) the stability of the shoreline and areas prone to erosion, (2) the direction and rate of the lateral drift, (3) the suitability of the material to be placed and its compatibility with existing sand on the beach to be nourished, and (4) the existence and location of sensitive resources.

Sea-level rise and coastal storms are the primary causes of coastal erosion in Massachusetts. Woods Hole Oceanographic Institution estimates that relative sea level in Massachusetts is rising approximately one vertical foot every 100 years.

Approximately 11% of Massachusetts' shoreline is critically eroding, according to the report "State Coastal Program Effectiveness in Protecting Natural Beaches, Dunes, Bluffs, and Rock Shores" (T. Bernd-Cohen and M. Gordon) *Coastal Management* 27:187-217, 1999. CZM staff estimates that approximately 65% to 70% of the coastline is eroding.

According to a mapping and hazard evaluation project, Massachusetts has an average erosion rate of approximately 0.6 ft/year.

Massachusetts' Coastal Management Program facilitates an online shoreline change map server with local average erosion rates along the shoreline. Present and past shorelines were determined from NOAA topographic maps, hydrographic maps, FEMA topographic maps, orthophotographs and aerial photos from 1844 to 1994. The average shoreline change rates were determined along shore-perpendicular transects at a 40-meter interval along the shore. The maps are available at: http://www.mass.gov/czm/hazards/shoreline_change/shorelinechangeproject.html.

The state guidelines for beach nourishment suggest that material used for nourishment should be similar in grain size or slightly coarser to that of the receiving beach. If the grain size of the source material is finer than the grain size of the receiving beach, it is susceptible to higher rates of erosion. In general, the percentage of fine sand in samples from the source material should not exceed the percentage of fine sand in samples from the receiving beach by more than 10 percent (though source material that is 10 to 20 percent greater in fine sand than the receiving area may be considered for beach nourishment). Material containing greater than 10 percent silt/clay and very fine sand is generally unsuitable for beach or dune nourishment. The suitability of source material containing significant quantities of coarse material is also subject to site specific conditions such as recreational use of the beach.

The proximity and location of sensitive resources such as eelgrass, shellfish, salt marsh, and endangered species are important site specific factors. The placement of material in the intertidal zone will directly impact organisms living there. Nourishment material that is compatible with the natural beach sediments will, however, promote rapid recolonization. A further consideration is

that once beach nourishment material is placed on a beach it is subject to tides and littoral currents. Some amount of sediment will be transported into nearshore waters with the potential to impact sensitive resources down-drift of the disposal site. The selection of nourishment sites should avoid areas with historically high rates of erosion and those that are up-drift of sensitive resource areas.

Preliminary steps that can be taken to prepare for future dredging and beach nourishment projects include:

- Identifying and mapping erosion “hot spots” and portions of the beach suffering from storm damage. While these are the areas where beach nourishment may be desired, it must be recognized that these areas will continue to erode because of their exposure or the presence of structures.
- Identifying areas of sensitive resources.
- Conducting a grain size analysis of the material existing on the beach in various locations. This information will then be available for comparison with dredge material or other source material proposed for beach nourishment.

One final issue connected with the placement of fill or dredged material along the shoreline is that of ownership and control of the land thus created. The Corps of Engineers and the Commonwealth of Massachusetts hold that the placement of material in areas where there are public rights, i.e., areas below the existing or historic high tide line, in no way restricts or extinguishes those public rights. Licenses issued by the Massachusetts Department of Environmental Protection to conduct such activity contain a provision that specifically conditions approval on that basis. The Corps of Engineers expects similar assurances.

General Strategy for Beach Maintenance

The following strategies are proposed as part of the Waterways Plan to address the problems of beach maintenance. The general strategy for improving the conditions of the beaches is to decrease the sources of debris and increase its removal from the beach. The major sources of debris are land-generated debris, marine debris and outfall pipes. Land-generated debris is caused by improper disposal of garbage on the beach or by the action of the wind blowing trash onto the beach. Marine debris originating in Scituate Harbor comes from Scituate Town Pier, restaurants and bars located adjacent to the beach and the boat berthing areas; tide and current move the debris onto the beach. After heavy rain or storm a quantity of debris is carried with the flow from outfall pipes and ends up on the beach. Seaweed is another issue that needs to be addressed. It is also likely that significant debris originates outside of the harbor. Such sources should be studied as part of an ongoing maintenance program.

Removal of beach debris should be accomplished through a variety or combination of approaches such as increasing the municipal commitment of public works staff and resources, organizing citizens to take on the responsibilities on a voluntary basis, or including maintenance of the beach as a condition of Chapter 91 permitting.

Decreasing Input from Sources

Because the major sources of land-generated debris are plastic straw and polystyrene food packaging and cups, an effective way to reduce trash on the beach would be to encourage businesses to decrease outdoor use of such materials. In order to facilitate such practice, a public awareness campaign would be useful. In addition, installing trash receptacles in strategic locations on the beach should decrease littering. The garbage receptacles should have lids that automatically close after trash is deposited to limit blow-out of trash during strong winds. Finally, posting of rules should enhance compliance.

A basic strategy for dealing with debris at Scituate Town Pier would be to install trash containers at strategic locations on the pier.

Seaweed left to accumulate and decompose on the beach can be unattractive, have an unpleasant smell, and otherwise limit recreational uses. On the other hand, some people find none of the above to be the case and seaweed does play a role in beach and dune stabilization. Most beach maintenance programs do, however, include periodic removal of seaweed from the beach.

Although the amount of debris reaching the beach can be reduced, a successful beach improvement plan will need to rely on voluntary citizen participation and compliance with regulations. Public education directed at visitors to and users of the harbor and beachfront areas is a key element in making these strategies work.

6. Summary of Land Use Actions

- Incorporate Waterways Plan recommendations into special permit, variance, and similar reviews, including protection of water dependent uses and limitation of any expansion of commercial parking as a waterfront use consistent with the Chapter 91 guidelines.
- Scituate Waterways Commission to consider proactive measures for protecting and enhancing water-dependent uses including representation from appropriate Boards and Commissions.
- Amend the Zoning Bylaw and any other relevant Town Bylaws to encourage uses that support water-dependent uses in Scituate Harbor and other location as appropriate.
- Seek funds and establish an ongoing process to study measures to protect properties in the FEMA velocity zones.
- Enhance the removal of beach debris by providing additional assignment of maintenance responsibility and funding to the DPW and additional trash receptacles.
- Enhance the removal of beach debris by increasing volunteer activities and increasing public awareness.

- Include conditions on the removal of beach debris in relevant permitting and licensing criteria.

B. Water Use

1. Water Use Plan

The future use of the harbor should be accommodated through a planned process that reduces existing or potential conflicts and protects its economic and scenic value. This Plan recognizes areas of the harbor that have different physical characteristics, attributes, and natural resources that present opportunities or constraints for uses. Among the relevant characteristics are water depth (including tidal variation), water quality, exposure (degree of protection from severe winds and waves), benthic resources (such as crustaceans, bivalve mollusks and eelgrass), distances from shore and to navigable waters, obstructions, and holding ground. In addition, the use and character of upland adjacent to the harbor waters influence the possible and appropriate uses of the water area.

As discussed earlier in the plan, the water area of Scituate accommodates a number of activities and uses. These include piers and wharves, berthing and moorage space for commercial and recreational boats, navigation channels and fairways for vessels, lobstering, recreational shellfishing, shellfish aquaculture, sport fishing, swimming, jet skiing, and water skiing. Many of these uses can share the resource compatibly, but others are inherently exclusive or conflicting. Multiple use of the resource is possible because uses vary in terms of spatial and temporal requirements, that is, the degree to which they commit the resource (e.g., seasonal, temporary, intermittent, permanent).

The demand from a variety of uses and the importance of the harbor to the economy and life style of Scituate justifies planning to manage and optimize the utility of the harbor. In general, there are relatively few conflicts in the use of the harbor by the existing uses. These conflicts are generally already regulated, and simply require ongoing management and enforcement of the existing Waterways Bylaws by the Harbormaster's Office.

The following principles should guide the future use of the water area of the harbor:

- Mooring areas should be designated only in those areas where benthic resources will not be damaged.
- Areas requiring protection of water quality to protect plant (eelgrass) and animal (shellfish) resources should be off-limits for overnight transient anchorage and moorings.
- Anchorage areas should be designated more precisely so as to reduce conflicts with other uses in the harbor.

To the extent that these principles are not reflected in the town's Waterways Bylaws, appropriate amendments to those regulations should be adopted.

Benthic living resources such as eelgrass and areas of shellfish concentration should be protected through all available means. Maintaining harbor water quality is an important fundamental condition for the health of these resources. The designated shellfishing areas should be adequately marked and moorings and anchoring controlled in accordance with the recommendations of this Plan. Once eelgrass mapping is finalized, the extent of the resource should be assessed against the mooring plan and adjustments made as appropriate to protect the eelgrass.

2. Commercial Fishing

The Plan reinforces the ongoing importance of commercial fishing in the economic and cultural life of Scituate. In the short term, the fin fish industry is experiencing substantial stress due to resource supplies and an emerging regulatory structure. As a result, there are shifts in the requirements for both water-side and shore-side facilities. In the longer term, requirements remain difficult to predict. As a result, the Waterways Plan recommends that commercial fishing facilities be maintained and existing deficiencies at the Town Pier be improved to provide for flexibility in its use for large boat commercial fishing.

In support of small boat commercial fishing, the Waterways Plan calls for commercial boat boatyard services to be provided at Scituate Marine Park. Present and anticipated future demand justifies the boatyard being able to provide repair and hauling services to most of the commercial boats in the harbor area.

Additional support of initiatives supporting marine trades would be provided, including construction of facilities for training and education, where practical.

It should be ensured that physical improvement projects in support of small boat fishermen are included in the priorities list for expenditure of the Harbor Access Gift Fund. Parking for commercial fishermen/shell fishermen should be provided at designated town landings.

3. Aquaculture

Aquaculture should be one of the priority uses of the rivers, reflecting both its considerable potential and role in sustaining and revitalizing the commercial shellfishing industry. Aquaculture will be supported by and benefit from the improved small boat support facilities.

Specific recommended actions include:

- Initiate studies and programs to grow shellfish such as steamers or mussels.
- Identify and mark areas of the Rivers naturally suited for shellfish and reserve areas and control use of the areas for boat mooring and anchorage.
- Coordinate funding for investments made in improving waterfront facilities with the needs of the shell fishers and the shellfish aquaculture program.

In general, more financial resources should be directed at shellfish propagation (seed and equipment) for recreational shellfishing. At the same time, the seeding program of the public

shellfish areas should be upgraded. To the extent possible, efforts should be made to increase to past levels the number of days per week shellfishing is allowed.

4. Sportfishing

The emerging sportfishing industry should be supported and promoted as it has the potential to have a significant positive economic impact. The promotion of the industry should include the enhancement of existing facilities, the development of any necessary supporting facilities, and the ongoing study and implementation of the re-introduction of indigenous species such as salmon.

5. Other Commercial Boating

Other potential commercial boating in Scituate Harbor consists of cruise ship and passenger boat operations and the operation of excursion boats, including whale watch fleet and party boat operations. The potential economic benefit of these activities to the town is enormous and substantial attention and adequate resources should be dedicated to improvements. While it is possible that small scale freight operations could be in demand in the future, accommodation of this use does not warrant current action.

Among the specific recommendations of this Plan regarding other commercial boating are the following:

- Facilities for the excursion boat fleet should be improved, including the provision of access to the boats and the installation of a common ramp system appropriate for access by the elderly and handicapped.
- Adequate circulation space for pedestrians should be provided to and from the excursion boats.
- The potential for increased docking facilities for excursion boats should be provided.

6. Recreational Boating

Scituate should take advantage of the opportunity to significantly increase the use of Scituate Harbor by recreational boaters. This should particularly focus on increasing transient recreational boat use, which brings economic benefits with minimal impacts. In this regard, the Waterways Plan supports measures that provide increased amenity and safety for recreational boating. Recommendations may include replacing bottom tackle and reorganization of vessels according to draft. Hearings would be held on this subject by the Waterways Commission. Other measures are generally discussed in more detail as part of the proposed improvements to public facilities and include:

- Provision of appropriately located dinghy docks, showers, laundry facilities, lockers, and other facilities available to the transient boater.
- Provision of an additional boat ramp on the North or South River available at all tides and provision for parking within a reasonable distance of the ramp.

- Improvements to the Cole Parkway, Jericho Road, and Driftway Park boat ramps including the provision of additional parking.
- Provision of improved dinghy tie-ups at various town landings.

7. Town Moorings

A study was undertaken of the efficiency of the town mooring system relative to the number of boats that could be moored within the most desirable protected areas within the breakwater. This investigation indicated that the current layout of moorings is generally efficient, in part because of the current density of the moorings.

However, there are substantial management advantages to remove outdated and non-standard anchors, and improve moorage efficiency in locations where the mooring scopes may be in conflict because of the size of the vessels.

As a result, this Plan recommends that a review of the public mooring field layout be implemented regularly at the direction of the Harbormaster. This program may be undertaken either within one season, or over a period of years.

Five of the town-owned moorings should be set aside for emergency and storm usage.

8. Navigation and Dredging

Almost all harbors and navigation channels require periodic dredging to eliminate shoaling and restore navigational depths. Most recently, the Waterways Commission has worked to implement dredging of the harbor, dredging of the South River, and reconstruction of the jetties and breakwaters of the harbor. These jetties and breakwaters protect the harbor and downtown area from dominant northeast storms. The U.S. Army Corps of Engineers has undertaken maintenance dredging of Scituate Harbor as a federally funded project which includes the channel, inner harbor and outer harbor mooring areas in Scituate Harbor. The preferred disposal alternative is nearshore disposal which will enhance the barrier beaches storm damage and flood control functions while protecting marine fisheries habitat.

Scituate Harbor is a natural harbor that nevertheless is subject to shifting bottom conditions in certain areas that are necessary for navigation. The maintenance of the Federal Channel is a responsibility that is managed for access by the Town of Scituate. A regular maintenance program should be established for the Federal Channel as well as for areas outside the Federal channel. A comprehensive report on dredging was prepared by Robert Fultz in 1995, that continues to be relevant and that identifies the principal requirements of ongoing maintenance dredging projects (Report on Dredging: Permitting, Testing and Funding, For the Scituate Waterways Commission, September 26, 1995).

The dredging program should provide for regular studies of bottom conditions, seek outside funding to support the program, make recommendations concerning the creation of a dedicated local fund as a match for outside funding, schedule permitting, and generally provide advice and

recommendations to the Board of Selectmen on a regular basis. The Harbormaster should be responsible for all dredge permit applications and coordination of harbor operations when dredging occurs.

The Plan also reinforces the responsibility of the Harbormaster to move or remove any bottom-held boat moorings that encroach into or allow encroachment by a vessel into the harbor navigation fairways and channels and the continued monitoring of placement of these moorings by the Harbormaster. In addition, wrecks should be marked to ensure the safety of divers and transient boaters wishing to anchor.

9. Coastal Water Quality

Through the 305(b) Water Quality Assessment process, DEP periodically rates water quality for coastal surface waters, estuaries and river segments according to use classes. These designations, used by the Environmental Protection Agency (EPA) and other federal agencies, classify water bodies according to appropriate uses. Appendix D to the Waterways Plan contains a table identifying applicable water criteria categories. The water criteria quality of Scituate's coastal water bodies, rivers and estuaries as of May, 2000, are identified below.

Salt Water Body	Use Class	Pollutants (Sources)
Cohasset Harbor	SA	Pathogens (Septic systems, point sources, non-urban runoff)
The Gulf River	SB	Pathogens (Septic systems, non-urban runoff)
Scituate Harbor	SA	Pathogens (Source unknown)

River or River Segment	Use Class	Pollutants (Sources)
North River – Main St., Marshfield to Mouth	SA	Pathogens (Septic systems, non-urban runoff)
Bound Brook	B	None listed

Source: Department of Environmental Protection. Information for other water bodies was not available.

“SA” is the highest quality salt water designation and means that dissolved oxygen is not less than 6.0 mg/L and average levels of Coliform bacteria do not exceed 70 Coliform per 100 ml. These waters are approved for swimming and boating. “SB” is a lower rating for salt water, reflecting dissolved oxygen not less than

5.0 mg/L and 200 Coliform per 100 ml, with more variability in pH than SA (314 CMR). These waters may be used for boating but not swimming. “B” is a fresh water designation of water which is acceptable for swimming and boating, but is not of high enough quality for use as a drinking water supply.

The construction of sanitary sewers around Scituate Harbor has greatly improved pollution of the harbor in wintertime. Two sewer pumpouts for boats in the harbor have been installed at the

Harbormaster's building. Regular water quality testing shows low fecal Coliform counts. In addition, as noted above, Scituate has upgraded the Wastewater Treatment Plant to meet state and federal requirements.

It is important to maintain a high level of water quality in all of Scituate's coastal waters to preserve the integrity of coastal ecosystems, maintain their quality for boating and swimming, and keep them appealing to residents, boaters and visitors to the Town's waterfront.

10. No Discharge Zone

The Commonwealth of Massachusetts has designated the waters of Scituate, Marshfield, Cohasset, the tidal portions of the North and South Rivers and adjacent coastal waters as a Vessel No Discharge Area ("NDA") pursuant to the Clean Water Act, Section 312(f)(3). An NDA is a body of water in which the discharge of vessel sewage, whether treated or not, is prohibited.

The Town(s) of Scituate, Marshfield, Cohasset, Norwell, Pembroke, and Hanover (the latter three of which border the North River) have made recent improvements to address land based sources of pollution that have contributed to the closure of shellfish beds, bathing beaches, impacts to eel grass beds, and overall degraded water quality. A variety of initiatives have been pursued by the various towns to address pollution impacts to the coastal receiving waters that include providing sewer service to coastal areas, implementing stormwater best management practices, enhancing stormwater Bylaws to address pollution from developed areas, and providing vessel pumpout services. This nomination for a vessel NDA complements these historic and ongoing efforts.

Cohasset Cove, Cohasset Harbor, the Gulf River Estuary (Scituate and Cohasset), Scituate Harbor, Green Harbor (Marshfield), and the North and South Rivers are all identified in the Massachusetts Integrated List of Waters as "Category 5" waters for pathogens requiring a Total Maximum Daily Load (TMDL) pursuant to Sections 303(d) and 305(b) of the Clean Water Act. A bacterial TMDL has been developed for Little Harbor in Cohasset and this document recommends the designation of Little Harbor as an NDA to help address pathogen contamination issues. The Massachusetts Bays Program (MBP) and the Cohasset Center for Student Coastal Research are partnering to conduct an assessment of Cohasset Harbor and the Gulf Estuary which is investigating the nutrient sensitivity and assimilative capacity of these waters.

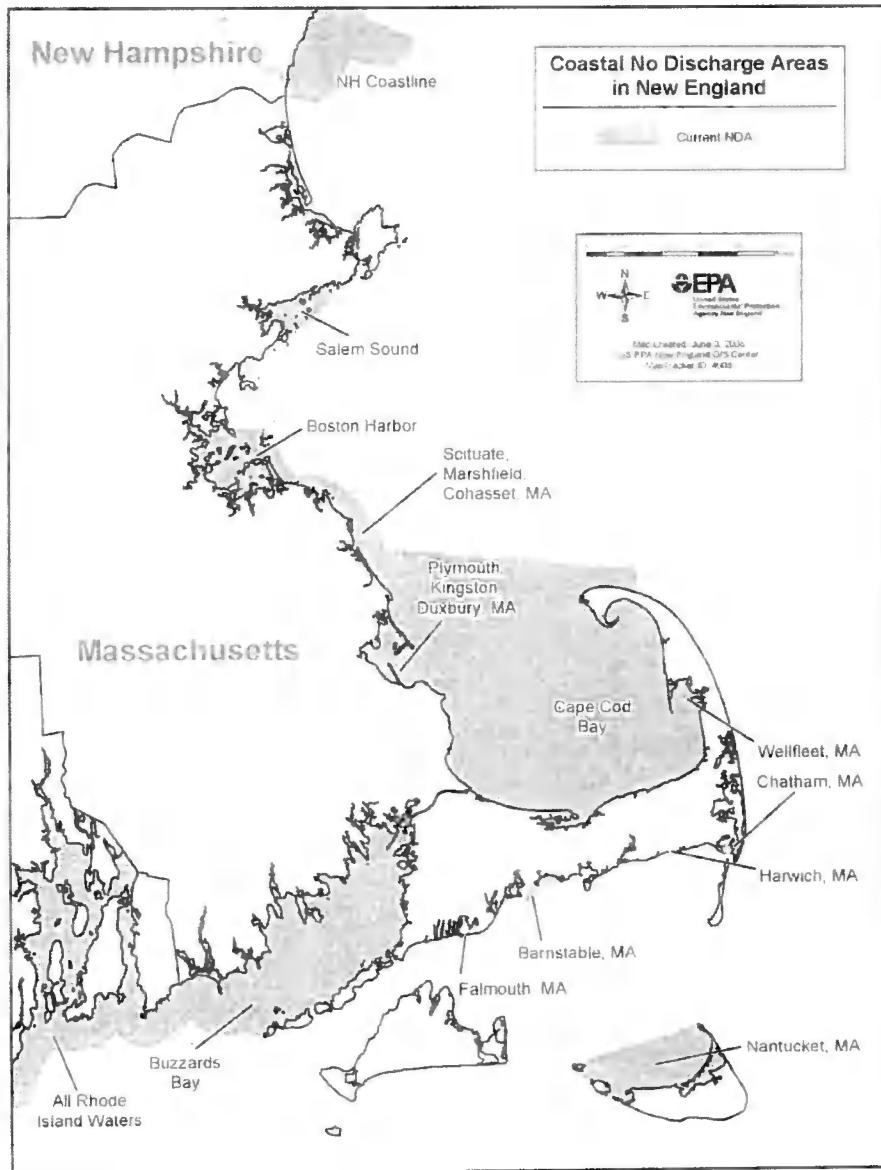
Sewage discharged from boats contributes to poor water quality, especially in poorly flushed embayments. Vessel sewage, like many other pollutants, can be harmful to the environment when it is not adequately treated. Sewage contains a high concentration of nitrogen, a substance that can lead to algal blooms and low dissolved oxygen concentrations that can affect the health of fish, shellfish, and eelgrass beds. Sewage also contains bacteria and viruses that can make shellfish unsuitable for human consumption and make our beaches unsafe for swimming.

Every boat with an installed marine head (toilet) must have a US Coast Guard approved Marine Sanitation Device (MSD). The US Coast Guard tests and certifies MSDs as Type I, Type II, or Type III. A Type I MSD means a device that, under the test conditions, produces an effluent having a fecal Coliform bacteria count not greater than 1,000 per 100 milliliters and no visible floating solids. A Type II MSD means a device that, under the test conditions produces an effluent having a fecal coliform bacteria count not greater than 200 per 100 milliliters and suspended solids

not greater than 150 milligrams per liter. Type III MSDs are holding tanks designed to prevent the overboard discharge of any sewage, treated or untreated; although, some Type III MSDs are equipped with a “y” valve that allows the operator to legally discharge stored sewage once the vessel is more than 3 miles offshore. Boats larger than 65 feet in length must use a Type II or Type III MSD, while boats under 65 feet can use a Type I, II or III MSD.

While Type I and Type II MSDs are designed to treat vessel sewage, they do not remove significant amounts of nitrogen from the waste before it is discharged. They also cannot remove all of the bacteria or viruses. Certain waters of high public and environmental value that require greater environmental protection than under existing laws, can be designated NDAs under the federal Clean Water Act. Because there is a risk that sewage may negatively impact these sensitive areas, all vessel sewage, even if treated by a Type I or Type II MSD, is prohibited from being discharged in NDAs.

NDA BOUNDARIES



(CZM Map 2008)

The NDA includes all waters of Plymouth Bay, Plymouth Harbor, Kingston Bay and Duxbury Bay; their respective coastlines and coastal tidal rivers within the following boundaries:

Map Ref # Description and Lat/Long

1. The northern extent of Green Harbor at the Rt 139 causeway (Lat $42^{\circ} 05' 11''$ N /Long $70^{\circ} 39' 03''$ W);
2. South and west along the South River to the Willow Street Bridge (Lat $42^{\circ} 05' 34''$ N /Long $70^{\circ} 42' 43''$ W);

3. South and west along the North River to the Columbia Road Bridge (Lat 42° 06' 26" N /Long 70° 48' 31" W);
4. South along the navigable extent of the Gulf River (Lat 42° 13' 30" N/Long 70° 47' 06" W).

The NDA boundary also includes coastal waters within municipal boundaries, westward of a delineation that extends from:

5. Marshfield municipal boundary (Lat 42° 04' 22" N/Long 70° 38' 55" W);
6. East to navigational marker N "2GH" located off Howland Ledge (Lat 42° 04' 36" N/Long 70° 36' 48" W);
7. North to navigational marker G "21" Whistle located east of Minot Light (Lat 42° 16' 34" N/Long 70° 42' 21" W);
8. Northwest on a heading to Thieves Ledge G "1" QG whistle (Lat 42° 19' 32" N/Long 70° 49' 51" W) to Cohasset municipal boundary (Lat 42° 18' 34" N/Long 70° 47' 25" W)*; and,
9. Southwest to Cohasset municipal boundary (Lat 42° 15' 53" N/Long 70° 49' 35" W).

Water Use Actions

- Initiate and maintain an active program of aquaculture improvements.
- Initiate and support improvements and programs promoting sportfishing.
- Undertake a regular review of town mooring anchorage system.
- Areas requiring protection for water quality and shellfish resource protection should be marked as off-limits for moorage or anchorage
- Mooring areas should be designated more precisely so as to reduce conflicts with other uses in the harbor.
- Set aside town-owned moorings for emergency and storm usage.
- Initiate a process for short-term and long-term maintenance dredging.
- Promote enforcement and compliance with No Discharge Zone. Secure alternate sources of funds for pump-out facilities.
- Promote enforcement and compliance for boat wash down facilities, including requirements for re-circulating systems.
- Maintain commercial fishing facilities and make improvements to Scituate Town Pier.
- Provide for improvements for other commercial boating as part of the Scituate Marine Park and as part of boat ramp improvements.

C. Public Facilities

1. Scituate Town Pier

General Recommendation

The condition of Scituate Town Pier has been declining for a long period of time. The Town Pier was last renovated in 1986-87. The present condition of the Pier does not allow full commercial use of the pier.

This Plan recommends that the town undertake a comprehensive program to reconstruct the pier to serve both existing and new uses.

In 2010 the Town hired Tibbetts Engineering to evaluate the structural integrity of the Pier and make recommendations for its rehabilitation. This plan seeks the implementation of those findings.

Recommended Uses

Reconstruction Costs and Resources

Based on a scenario of entire replacement and provision of the uses noted above, the reconstruction budget will need to be determined. The need for funding to replace or substantially reconstruct the pier has been recognized for some time.

These costs could vary depending upon a number of factors, including the following key factors:

- The pile capacity needs to be field tested to determine actual capacity (rather than typical theoretical capacity). If it is determined that the pile capacities are higher than expected, then savings may occur by reusing some existing piling.
- The layout of the pier could be reconsidered if it is to be entirely or largely reconstructed. Efficiencies may accrue that must be carefully studied.
- The costs are based on standard unit costs that may vary depending upon the final design.
- The program for the pier must be refined prior to final design, which could affect the scope of the project.
- Finally, timing will be important. Slow but steady inflation of construction costs must be matched by budgets as the time frame for construction is extended.

To finalize the program and costs of Scituate Town Pier, substantial engineering studies need to be undertaken. Next, the technical drawings and studies need to be prepared to allow the improvements to be bid and constructed. This Plan recommends that the State and town fund the required technical investigations and construction documents as an early phase action. This would include the following elements:

Engineering Feasibility Analysis and Concept Design

- Field testing and analysis of existing pile bearing capacity and determination of any potential for reuse.
- Preparation of survey and geotechnical studies.
- Finalization of the redevelopment program including all relevant vertical and lateral loading criteria, space needs by use and other technical criteria.
- Preparation of alternative layouts and engineering design alternatives to cost effectively meet the program and criteria.
- Determination of preferred plan.
- Preparation of a cost estimate and confirmation of the investment and funding program and approach.

Final Design and Bid Documents

- Preparation of Design and Contract Documents through 25%, 75%, and 100% complete.
- Preparation of revised cost estimates.

Permits and Approvals

- Preparation and submittal of all necessary environmental documentation, permits and approvals, including Chapter 91 license and Corps of Engineers permits.

2. Town Landings and Commonwealth Tidelands

Public Access Vision Statement

The following goals form the basis for the public access recommendations and actions proposed in the Scituate Waterways Plan:

- To establish a walkway including three sections, the Scituate Harbor Walk, the First Cliff Route and the Lighthouse Route.
- To create pedestrian access loops in the downtown area, encouraging and affording convenient movement between commercial activities on Front Street and activities on the waterfront.
- To reduce visual obstructions to eliminate loss of view corridors to the harbor.

New development along the shore often infringes on historic ways to water. If these ancient pathways are not marked on the site or at a minimum, mapped, they may be lost to the public forever. By investigating Registry of Deeds records and Assessor's Maps, it may be possible to identify ways to water that were once considered public but were abandoned, and reclaim them for public use. Sometimes old access points can be located by asking long-time Town residents for information. If necessary, title searches may be used to establish public ownership of these access points.

The state's Chapter 91 licensing program governs development below the historic high tide line and on filled tidelands. Its regulations require that public access be accommodated when new construction occurs in tidelands. The Planning Board should monitor development on the coast in compliance with Chapter 91.

Steps to improve or restore views must be made, including stronger enforcement of public access via historic rights-of-way and greater control over the type and amount of construction and activity in the harbor area. As part of this process, the historic and existing town rights to waterfront accessways needs to be confirmed in some cases. There are instances where historic rights-of-way may be useful to establish for potential restoration of access. In other cases, private development may have intruded, perhaps significantly, into the public town landings. As a result, this Plan recommends that Scituate's Board of Selectmen create a volunteer committee to research historic rights-of-way to the harbor.

For all public access points, a new and attractive signage system should be put in place that indicates public access and amenities. This signage system could also be used for public access within properties subject to Chapter 91 public access requirements and agreements as discussed elsewhere in the Waterways Plan.

Trash receptacles should be placed at all town landings and town-owned access points, and bike racks located wherever is feasible.

Funding for improvements may come from a variety of sources. This Plan envisions the use of a dedicated fund administered by the town. The fund would be financed through grant sources, Chapter 91 tidewater displacement fees that are channeled to the town, direct town contributions, and other sources.

3. Other Public Improvements

Other public improvements recommended within the Waterways Plan include access and physical improvements to several areas along the water's edge.

There are few opportunities for public access to the water's edge along significant portions of the harbor front. The Plan also recognizes that most of the properties seaward of Front Street in this area do not appear to contain any filled tidelands, so that public access doctrines that could permit perpendicular access to the water generally do not apply. The Plan further recognizes that there are numerous informal access paths and limited private accessways that have been secured through agreements among property owners in this area. The Plan recommends that increased public access be provided within these existing accessways through purchase of easements, property agreements,

or other actions. Such improvements could be funded, in whole or in part, by the Harbor Access Gift Fund.

Public fishing opportunities from piers should be provided in the future through public fishing pier improvements located at appropriate town landings or other locations. Specific locations that might be considered include Scituate Marine Park, Driftway Park, along Edward Foster Road, and elsewhere along the North and South River. This could also provide opportunities for handicapped access and enjoyment, as well as increased facility for skiff and dinghy use. The planning for this activity should fall under the auspices of the Waterways Commission, and the Massachusetts Office of Fishing and Boating Access should be considered as an appropriate source of funding.

Summary of Public Facility Actions

Undertake the engineering analysis and design of the reconstruction of Scituate Town Pier to correct fundamental problems and to better accommodate existing and future uses as called for in the Water Use elements of the Waterways Plan.

- Fund and construct Scituate Town Pier improvements.
- Undertake a planned program of public access and water-dependent capital improvements as listed in the Waterways Plan.
- Establish a Right-of-Way Committee to confirm and protect existing public rights.
- Establish a planning process and reach a conclusion on improvements to existing boat ramps and potential new boat ramp locations, and pursue funding for these improvements.

D. Regulatory Framework for Waterways Licensing

1. Introduction

Massachusetts' principal tool for protection and promotion of water-dependent uses of its tideland and other waterways is M.G.L. Chapter 91 (Public Waterways Act, 1866). Chapter 91 and the waterways regulations (310 CMR 9.00) are administered by the Waterways Regulation Program of the Massachusetts Department of Environmental Protection (DEP).

The Chapter 91 statute was amended in 1984 with new substantive and procedural requirements to ensure that tidelands—both presently flowed and previously filled—are utilized only for water-dependent uses or otherwise serve a proper public purpose that provides greater public benefit than detriment to the rights of the public in tidelands. Projects involving nonwater-dependent use also are required by the statute to be consistent with CZM Policies.

Major revisions of the waterways regulations followed in October 1990. Key provisions of the new regulations are designed to promote water-dependent use of the shoreline; preserve and promote public access; and encourage local involvement in Chapter 91 licensing decisions through municipal harbor plans, which provide harbor-specific guidance to the regulatory decisions of DEP

under Chapter 91. A companion set of regulations (301 CMR 23.00) governing the development and approval of municipal harbor plans was also adopted that same year.

The Chapter 91 regulations stipulate that where a State-approved harbor plan exists, projects requiring a DEP license or permit and subject to the current regulations must conform to the plan (310 CMR 9.34(2)). The municipal harbor plan is used by DEP for guidance which amplifies upon discretionary requirements of the waterways regulations. The regulations also provide that the municipal harbor plan may contain substitute standards for certain use limitations or numerical standards specified in the waterways regulations for nonwater-dependent uses. The alternatives established by the plan must be equally as effective in achieving the objectives of Chapter 91 and the waterways regulations.

The recommendations and guidance in this Waterways Plan are the product of direct consultations with CZM and DEP staff, and have been carefully crafted to reflect the principles and standards used consistently by DEP in licensing projects on tidelands. Moreover, the recommendations that follow reflect the town's goals and objectives for the waterfront and comprise a comprehensive and cohesive plan for the proper and optimum use of Scituate Harbor.

2. Properties within Chapter 91 Jurisdiction in Scituate

There are two types of tidelands: (1) Commonwealth tidelands which are, for most of the Massachusetts coastline, all lands below the historic low water mark extending out three miles to the limit of state jurisdiction. This area is owned by the Commonwealth or held by private persons in accordance with the trust for the benefit of the public. (2) Private tidelands are those areas between historic high and historic low water, which are usually privately owned but on which the Commonwealth reserves and protects public rights of fishing, fowling and navigation (and the natural derivatives thereof). The historic high water marks are the farthest landward tide lines which existed "prior to human alteration" by filling, dredging, impoundment or other means (310 CMR 9.02). Thus, Chapter 91 applies to filled as well as flowed tidelands, so that any filled areas, moving inland to the point of the historic high tide line, are subject to jurisdiction.

For planning purposes, the location of the historic high water mark as of 1848 has been delineated on maps prepared under contract to the Department of Environmental Protection. DEP will use the mapped line as the presumptive line of jurisdiction in its determinations of which structures and uses along the shoreline of Scituate Harbor require Chapter 91 licensing. Based on the DEP map, the Waterways Plan identifies the existing structures and uses that appear to be located on filled Commonwealth tidelands and other tidelands subject to jurisdiction of the waterways licensing program.

If a property owner's parcel of land occupies all or a portion of Commonwealth tidelands, then the owner is, in fact, occupying land in which the public has rights to use for "fishing, fowling, navigation...and all other lawful activities, including swimming, strolling, and other recreational activities". §9.35(3)(b). In particular, if this land is used for any buildings, decks, piers, bulkheads, yards, or any other type of enclosed areas that are off-limits to the public, then the property owner is effectively privatizing trust lands that would otherwise be available for public use and enjoyment.

Chapter 91 authorization is generally required for any fill, structure or use not previously authorized in areas identified above, including any changes of use and structural alterations. Types of structures include: piers, wharves, floats, retaining walls, revetments, pilings, bridges, dams, and waterfront buildings (if on filled lands or over the water). In Scituate, there are a number of properties where structures and uses occupy filled Commonwealth tidelands without complete and proper authorization. Moreover, most of these properties are being used for non-water dependent purposes. Owners of such properties are required by Massachusetts's law to obtain licenses to ensure that their non-water dependent structures and uses of Commonwealth tidelands meet the requirements of Chapter 91.

The Plan calls on DEP to give priority attention to compliance and enforcement matters, in close cooperation with relevant town officials (Harbormaster, building inspector, conservation agent, etc...). In particular, arrangements should be made (including appropriate training, as resources are available) to enable town personnel to effectively carry-out a monitoring and reporting function. The ongoing participation of these officials will help to ensure full compliance with applicable conditions of existing licenses and to identify new changes of use and structural alterations (including minor project modifications) that should be brought to the attention of DEP. The Waterways Commission should provide any applicable evidence to DEP, which has enforcement discretion.

3. Licensing under the 1990 Standards of the Waterways Regulations

The waterways regulations contain several core provisions that are essential to the control of nonwater-dependent uses of Commonwealth tidelands in Scituate Harbor. These are:

(The citations in this section refer to provisions of the waterways regulations in effect between September 15, 1978, and October 3, 1990).

The project shall preserve any rights held by the Commonwealth in trust for the public to use tidelands...for lawful purposes...[Specifically], the project shall not interfere with public rights of navigation...public rights of free passage over and through the water...public rights associated with a common landing, public easement, or other historical legal form of public access from the land to the water that may exist on or adjacent to the project site...public rights of fishing, fowling, and the natural derivatives thereof...[and on Commonwealth tidelands] all other lawful activities including swimming, strolling, and other recreational activities...§9.35)

A nonwater-dependent use project that includes fill or structures on any tidelands shall not unreasonably diminish the capacity of such lands to accommodate water-dependent use. (§9.51)

A nonwater-dependent use project that includes fill or structures on any tidelands shall devote a reasonable portion of such lands to water-dependent use including public access in the exercise of public rights in such lands. (§9.52)

A nonwater-dependent use project that includes fill or structures on Commonwealth tidelands... must promote public use and enjoyment of such lands to a degree that is fully commensurate with the proprietary rights of the Commonwealth therein, and which ensures

that private advantages of use are not primary, but merely incidental to the achievement of public purposes. (§9.53)

All nonwater-dependent use projects consisting of infrastructure facilities on tidelands...shall take reasonable measures to provide open spaces for active or passive recreation at or near the water's edge, wherever appropriate. (§9.55)

Associated with each of these core provisions are a number of discretionary requirements, several of which are of primary relevance to Scituate and are thus amplified upon by the recommendations of this Plan. The specific discretionary requirements on which the Waterways Plan provides guidance for DEP application are listed below.

§9.35(2)(c) Access to Town Landings. “The project shall not significantly interfere with public rights associated with a common landing, public easement, or other historic rights associated with a common landing, public easement other historic legal form of access from the land to the water that may exist on or adjacent to the project site.”

§9.35(5) Management of Areas Accessible to the Public.

(b)“Any project required to provide public access facilities...shall encourage public patronage of such facilities by placing and maintaining adequate signage at all entryways and at other appropriate locations on the site...”

(c) “No gates, fences, or other structures may be placed on any areas open to public access in a manner that would impede or discourage the free flow of pedestrian movement...”

§9.52(1)(a) Utilization of Shoreline for Water-Dependent Purposes. “In the event that the project site includes a water-dependent use zone, the project shall include...facilities that generate water-dependent activity...”

§9.52(1)(b) Utilization of Shoreline for Water-Dependent Purposes.

(1) “In the event that the project site includes a water-dependent use zone, the project shall include...walkways and related facilities along the entire length of the water-dependent use zone...”.

(2) “In the event that the project site includes a water-dependent use zone, the project shall include...appropriate connecting walkways that allow pedestrians to approach the shoreline walkways from public ways or other public access facilities to which any tidelands on the project site are adjacent.

§9.53(2) Activation of Commonwealth Tidelands for Public Use.

- (a) “[the project shall include] at least one facility [that] promotes water-based public activity...”
- (b) “...the project shall include exterior open spaces for active or passive public recreation...[which] shall be located at or near the water to the maximum reasonable extent [and shall include] open space amenities such as lighting and seating facilities, restrooms and trash receptacles...”
- (d) “...the project shall include a management plan for all on-site facilities offering water-related benefits to the public...”

(e) "...in the event that water-related public benefits which can reasonably be provided onsite are not appropriate or sufficient, the Department may consider measures funded or otherwise taken by the applicant to provide such benefits elsewhere in the harbor or otherwise in the vicinity of the project site."

§9.55 Standards for Nonwater-Dependent Infrastructure Facilities.

(1) "[Infrastructure facilities] shall include mitigation and/or compensation measures as deemed appropriate by the Department to ensure that all feasible measures are taken to avoid or minimize detriments to the water-related interests of the public."

(2) "[Infrastructure facilities] shall take reasonable measures to provide open spaces for passive recreation at or near the water's edge, wherever appropriate."

It should be noted that the Waterways Planning Sub-Committee has determined that there is no need to recommend substitutions for the standards of the waterways regulations. The Plan recognizes that there may be isolated cases where compliance with the applicable use limitations (e.g., ground floor facility of public accommodation requirement) of the 1990 regulations would create a substantial hardship for the continuation of a use or structure existing as of January 1, 1984. In such situations, the variance procedure set forth at 310 CMR §9.21 is considered by this Plan to be an adequate forum to address the hardship issue.

4. Effect of Plan on Pending and Future License Applications

Section E below provides specific guidance to DEP in amplification of the above referenced Chapter 91 licensing standards to achieve the goals and objectives of the Scituate Waterways Plan. Specifically, that section provides guidance to DEP in applying the 1990 standards governing projects requiring Chapter 91 authorization from DEP. It is the understanding of the Waterways Commission, the municipal body with lead responsibility for plan implementation, that DEP will adhere to the greatest reasonable extent to the guidance specified in the Waterways Plan, which amplifies the discretionary requirements identified in sections 3 and 4 above. It is the further understanding of the Waterways Commission that, in accordance with 310 CMR 9.34(2), DEP will require conformance with all applicable recommendations of the approved Waterways Plan in the case of all waterways license applications submitted subsequent to the effective date of Plan approval, as well as to pending applications for which the public comment period has not expired.

E. Guidance to DEP for Chapter 91 Licensing in Scituate Harbor

1. Objectives

The following objectives for providing access to and along the shoreline in Scituate Harbor form the basis of the Chapter 91 licensing requirements and recommendations presented in this Waterways Plan.

- Create more public open space on Scituate Harbor by eliminating undue encroachments on the dry sand beach areas by storefront property owners, and in some cases by providing public access to the seaward perimeter of existing hard surface structures.

- Make the Scituate shoreline more approachable for the general public by eliminating undue encroachment on town landings, and by providing more pedestrian accessways and view corridors to the waterfront.
- Provide appropriate on-site access-related or water-dependent improvements and/or contributions to the Scituate Harbor Access Gift Fund for off-site harbor improvements.

This section includes specific provisions to guide the Chapter 91 licensing process in Scituate. These customized guidelines are intended to ensure that the licensing process is equitable and purposeful and that the goals for licensing outlined above are met. In addition, the Scituate guidelines parallel the conventional DEP approach to licensing by giving first priority to on-site public benefits, seeking off-site public benefits only where on-site improvements are insufficient or not feasible. Accordingly, for properties presumed to lie within jurisdiction, the Waterways Plan first identifies general and specific on-site benefits to be provided as a condition of DEP licenses, to ensure that the uses of Commonwealth tidelands reflect the proper public purposes expressed by the Town. Secondly, the Waterways Plan presents a method for determining the extent to which compensation to the public should take the form of monetary payment to a Town fund to be used for access-related improvements elsewhere on the Harbor. The guidance of the Waterways Plan is intended to apply to all existing and new development that will be licensed under the waterways regulations, including the amnesty provisions.

2. On-Site Public Benefit Requirements

Public Open Space

A fundamental goal of this licensing program is to preserve and enhance the amount of public open space at the immediate waterfront, to the maximum reasonable extent.

Public Accessways

Another goal of the Waterways Plan is to make the harbor more approachable from the land side. To begin with, the Waterways Plan requires that applicants for licensing whose property abuts town landings or other historic public rights of way must submit evidence (e.g., title search, survey) as part of the application to ensure that the property is not encroaching on such public accessways. In some cases, these also would be appropriate locations for providing access amenities such as benches, trash receptacles, etc.

The Waterways Plan recommends that any perpendicular accessway located on a property zoned for residential use be open to the public. Moreover, licenses issued by DEP on these properties should specifically authorize the licensee to manage public use of the accessway by adopting reasonable rules (subject to prior review and written approval by DEP) as are necessary to protect public health and safety and private property, and to discourage trespass and other unlawful activity by users of the area intended for public passage. Finally, each license should contain a statement to the effect that the exercise of free public passage within these accessways shall be considered a permitted use to which the limited liability provisions of M.G.L. c.21 sec.17c shall apply on behalf of the property owner in question.

Physical Improvements for Pedestrian Access and/or Water-dependent Use

The Plan supports development of three specific mini-loops along the Harbor, to enhance lateral connections and further facilitate public pedestrian movement. These mini-loops will be created by establishing interconnected walkways along the perimeter of existing hard surface structures (i.e., bulkheads, parking lots and decks) on specific abutting properties already used as facilities of public accommodation. These connecting walkways are also specified as locations for providing access amenities such as benches, trash receptacles, etc.

In addition to specific improvements listed for a particular property, DEP should refer to the general types of improvements that are recommended in this Plan on a region-by-region basis. These improvements are negotiable on a case-by-case basis, based on their merits and on their conformity to this Plan. In some cases the recommendations are unique to each region, and there are some recommendations that apply along the entire waterfront. For example, a universal problem is that points of access to the waterfront and the location of public access related facilities are difficult for residents and visitors to identify and locate in Scituate because of inadequate signage. Accordingly, for every region the Waterways Plan proposes that the Town develop and employ a uniform signage system that clearly identifies all public access opportunities. In addition, all accessways from Front Street to the waterfront should be marked with adequate signage on both the landward and seaward sides of the accessway.

3. Off-site Public Benefit Requirements (Contributions to the Harbor Access Gift Fund)

Although the general premise for obtaining a Chapter 91 license is that a property owner will be expected to provide public open space and related physical improvements, in certain situations the feasibility of providing such benefits on the project site is limited and may even be impossible. In such cases where the on-site public benefits are insufficient to compensate for the detriments to public rights on Commonwealth tidelands, DEP has traditionally sought alternative benefits in the form of monetary contributions to fund the provision of off-site benefits elsewhere in the harbor, preferably in a nearby location. Since this situation is likely to occur in Scituate, the Waterways Plan recommends that Scituate Board of Selectman established a Harbor Access Gift Fund. The purpose of the fund is “to receive Chapter 91 public benefit mitigation funds and other donations, the proceeds of which shall be used without further appropriation to enhance the public’s access and use and enjoyment of the shoreline and waters of Scituate, including but not limited to maintenance and improvements of town landings and other public properties for water dependent use”.

In order to determine whether a contribution to the Harbor Access Gift Fund will be required as a condition of a license, the Waterways Plan has developed a methodology that involves a relatively simple set of computations. The licensee has the option of making a lump sum contribution to the Fund or making annual payments amortized over 30 years, which is the standard license term for non-water dependent use projects. In addition, upon recommendation of the Waterways Planning Sub-Committee, an alternative payment schedule involving partial deferments may be authorized in unusual cases.

DEP is responsible for determining the contribution in accordance with the methodology and will require payment as a condition of licensing. DEP manages tidewater displacement fees which are

paid into the Waterways Enterprise Fund, which would be contributed then to the Harbor Access Gift Fund. The town is responsible for collecting the moneys and administering the Harbor Access Gift Fund, into which all collections will be deposited. As part of this collection program, the Town may create liens against the property for overdue accounts, so that title to the property cannot be passed until the lien is satisfied. Also, DEP's enforcement powers may be useful if the town has difficulty with overdue payments. Licenses should include a condition stating that non-payment over a specified time period (maybe three (3) years) will be grounds for enforcement action (including penalties and possible license revocation).

4. Additional Amplifications of Discretionary Requirements

The following amplifications are applicable to all properties, including those that fall under the amnesty program. As noted in 310 CMR 9.10, "for purposes of authorizing projects under the amnesty program, the applicable procedural rules found at 310 CMR 9.11-9.30 of [the 1990 regulations] shall be in effect..."

§9.16(2)(c) Tidewater Displacement Fee. "Except as provided in 310 CMR 9.16(4), prior to issuance of a license for any fill or structure that will displace tidewaters below the high water mark, the applicant, or his/her heirs or assignees responsible for such displacement, shall, at the discretion of [DEP].... [consider] a contribution to a special fund or other program managed by a public agency or non-profit organization in order to directly provide public harbor improvements."

The Scituate Waterways Plan requires that tidewater displacement fees levied by DEP be paid directly to the Scituate Harbor Access Gift Fund, as described in Section 6(a)(2) of this Plan.

§9.22(1) Maintenance and Repair of Fill and Structures. "No application for license or license amendment shall be required for [maintenance and repair] activity. Maintenance and repair include...restoration to the original license specifications of licensed fill or structures that have been damaged by catastrophic events, provided that no change in use occurs and that...in the case of flood-related damage, the cost of such restoration does not exceed 50 percent of the cost of total replacement according to the original license specifications..."

The Scituate Waterways Plan calls for a strict enforcement of this requirement and for close coordination between DEP and the Scituate Building Inspector, to determine when further licensing is required for structures that have been damaged beyond the 50% replacement cost limit.

§9.22(3) Minor Project Modifications. "The licensee may undertake minor modifications to a license project without filling an application for license or license amendment. Such modifications are limited to...No such modifications shall be undertaken until the licensee has submitted written notice to the Department describing the proposed work in sufficient detail with reference to any relevant license plans, for the Department to determine compliance with the above conditions."

The Scituate Waterways Plan calls for strict enforcement of this requirement and for DEP to provide the Waterways Commission with opportunity to review and comment upon any written notice of proposed minor project modification.

F. Long Term Plans

The Waterways Plan includes a series of long term goals for the Harbor, and outlines a process for studying, reviewing, and implementing these long term improvements. The long term goals of the Waterways Plan expansion of the Harbor mooring areas through a dredging program, and the use of dredge material to provide increased beach area in appropriate locations along central waterfront areas that have experienced beach depletion or where private improvements have encroached substantially on available beach areas.

G. Summary of Recommended Actions for Water Access and Enhancing Water-Dependent Uses

The following list is a summary of the recommended actions for increasing public access and enhancing water dependent uses as contained in this Plan. The purpose of this list is to guide public actions and expenditures. The public actions should include review and approval of proposed projects through Chapter 91 licensing or local variances and special permits. This list should also be used to prioritize allocation of funds and the pursuit of grants or special expenditures from the Town, the Commonwealth, or Federal sources. This list should also serve as the basis of expenditures from the Harbor Access Gift Fund. It is intended that those actions listed as "high" priority would be undertaken first and in preference to other actions, unless specific funding sources or other opportunities present themselves in a manner that would preclude action on a higher priority action.

This list should be reviewed and updated annually.

1. High Priority Actions

- Reconstruct Scituate Town Pier to correct existing deficiencies and provide for additional needs.
- Support ongoing development of Scituate Marine Park and Maritime Center and promote boatyard activities.
- Support and enhance water based recreational activities, including Scituate Sailing Program.
- Repair boat ramps at Cole Parkway, Jericho Road, and Driftway Park.
- Provide for excursion boat access (whale watch fleet, etc.).
- Initiate beach maintenance programs.
- Implement a new public access signage and information system.

2. Medium Priority Actions

- Provide pedestrian access for excursion boats.
- Undertake recommendations for improvements or regulations for Cole Parkway Parking Lot.
- Undertake recommendations for establishing harbor loop walkways.

3. Long Term and Ongoing Actions

- Undertake additional improvements at the Town owned landings including Cole Parkway Marina and Scituate Marine Park.
- Undertake recommendations for additional boat ramp on North and South Rivers.
- Purchase or obtain additional access rights-of-way.
- Establish and support marine trade education and opportunities.
- Establish and support maritime history education programs.
- Establish and support marine fisheries education and support programs.

VI. Implementation Framework

A. Harbor Management Roles and Responsibilities

The following discussion summarizes the principle recommendations of the Scituate Waterways Plan in regards to the reallocation of responsibilities for the harbor and its edges consistent with the goals and conclusions of the Waterways Plan.

1. Scituate Harbormaster's Office

The Scituate Harbormaster's Office, with guidance from the Scituate Waterways Commission, is recommended to be the municipal body with lead responsibility for implementing the Waterways Plan and providing a forum to enable for its coordinated management. The principal responsibilities of the Harbormaster's Office should remain the same as currently defined. Enforcement of regulations would remain the responsibility of the Harbormaster's Office. Under state statutes the Harbormaster has the following authorities, which are part of the job description of the Scituate's Harbormaster:

- To enforce the rules and regulations for motorboats and other vessels (M.G.L. C. 90B)
- To authorize by permit the mooring on a temporary basis of floats or rafts held by anchors or bottom moorings, within the jurisdiction of the town and, further, to remove such floats or rafts installed without permission (M.G.L. C. 91, sec. 10A)
- To station vessels and make rules for and to direct the anchoring of vessels in the harbor and, as necessary, to direct the berthing of vessels at public piers and wharves (M.G.L. C. 102).

The responsibilities of the Harbormaster's Office shall include:

- Coordinated management of the Scituate Harbor.
- Management of Waterways Enterprise Fund operating costs and receipt of revenues.
- Management of lease properties and collection of fees directly associated with the use of Town waterfront assets, including the Scituate Marine Park, Cole Parkway Marina, Town Pier, mooring fields, and private sector use fees.
- Preparation of annual reports to the Board of Selectmen, including fee schedules.
- Preparation of annual recommendations concerning changes in the Waterways Bylaws as they apply to Scituate waterfront assets.
- Regular meetings to provide for coordination on all harbor elements and activities.
- Participation in pre-application consultation meetings with DEP to provide preliminary guidance on standards of the harbor plan to be met by a project in accordance with 310 CMR 9.11(1)(a).
- Provision to DEP with written recommendation as to a proposed project's conformance with the Waterways Plan in accordance with 310 CMR 9.34(2).
- Creation and adoption of a prioritized list for expenditures consistent with the Waterways Plan to ensure that expenditures are for appropriate purposes and are properly sequenced, to be funded through the Harbor Access Gift Fund and direct town expenditures.
- Approval of projects for funding through the Harbor Access Gift Fund.
- Maintenance of the annually updated list of other recommended actions for harbor improvements.
- Preparation of annual recommendations concerning changes in the Waterways Bylaws or Shellfish Regulations.

- Recommendations concerning updates and revisions in the Waterways Plan.
- Preparation and management of an organized strategy for both maintenance dredging and beach nourishment, including scheduling of projects and permits and identification of funds.

In implementing the Waterways Plan, procedures will be developed for DEP and the municipality to use in coordinating review and decisions on Chapter 91 applications. These procedures will address DEP's forwarding of notices and applications to the municipality, the holding of local public hearings, municipal comments on the application, requests for extension of time for review and the like.

2. Scituate Waterways Commission

The Plan recommends that the Scituate Waterways Commission continue to provide the Harbormaster's Office, the Board of Selectmen, and other Town boards and departments with appropriate recommendations and information relating to the ongoing management and development of the Scituate Waterways. The principal responsibilities of the Waterways Commission should remain the same as currently defined, including:

- Making specific recommendations relating to the coordinated management of the harbor.
- Monitoring the implementation of the Waterways Plan and preparing updates.
- Providing recommendations concerning changes in the Waterways Bylaws and Shellfish Regulations.
- Making recommendations on the disbursements of the Waterways Enterprise Fund and on all capital improvements relating to the waterfront other than as provided for elsewhere.
- Identifying and seeking funding sources for the ongoing maintenance and development of the Scituate Waterways.

3. Scituate Historic Rights-of-Way Committee

Scituate's Board of Selectmen should create a volunteer committee to research historic rights-of-way to the harbor. These rights-of-way could provide important additional accessways to the water. Membership should be open to anyone in the community with an interest in serving, but the committee would benefit from having an attorney, title abstracter or surveyor, long time residents of the town, and members of the Historical Commission. The committee's task is to research public records to rediscover and document forgotten public ways.

The Massachusetts Coastal Zone Management Office's publication *Preserving Historic Rights of Way to the Sea: A Practical Handbook for Reclaiming Public Access in Massachusetts* (1996) is a thorough guide to the process and sources of information.

The Board composition would be established statutorily and would be appointed by the town.

4. Other Existing Departments and Entities

Planning Board and Zoning Board of Appeals

As recommended in this Plan, the Waterways Planning Board or Zoning Board of Appeals would continue to be responsible for the review and local recommendations concerning Chapter 91 licensing, with recommendations from the Harbormaster's Office and Waterways Commission. However, a new procedure should be instituted that would make local approvals and hearing requirements more understandable to applicants. Specifically, a checklist of local approvals should be provided to all applicants for any local land use decisions that list the jurisdictions and basic requirements of each decision, including submittal requirements, time frames, mandated public hearings and the like.

B. Chapter 91 Licensing Implementation

- The Harbormaster's Office, with the guidance of the Waterways Commission should provide comments or recommendations to the appropriate boards, i.e., the Planning Board and DEP. Any comments or recommendations provided by the Harbormaster's Office should be under the authority and support of the Scituate Board of Selectmen. The Planning Board should notify the Harbormaster's Office of all Chapter 91 applications and of all public comments received by those Boards in respect to any Chapter 91 applications. As earlier outlined the Harbormaster's Office will then:
 - Participate in pre-application consultation meetings with DEP to provide preliminary guidance on the standards of the Waterways Plan to be met by a project in accordance with 310 CMR 9.11 (1)(a).
 - Coordinate and participate in public hearings held by DEP in Scituate.
 - Provide DEP with a written recommendation as to a proposed project's conformance with the Waterways Plan in accordance with 310 CMR 9.34 (2).
 - As necessary, request the Board of Selectmen to submit a petition to intervene on behalf of the municipality to become a party in any adjudicatory hearing on the license.

For all projects in or affecting the harbor and requiring local approval, the Harbormaster's Office should have the opportunity to provide comments on the project's consistency with the Waterways Plan.

The Harbormaster's Office should also carry out a monitoring and reporting function in close cooperation with DEP. This effort will help ensure full compliance with applicable conditions of existing licenses as well as identify new changes of use and structural alterations (including minor project modifications) that should be brought to the attention of DEP.

The Harbormaster's Office, along with the Waterways Commission, will update and revise the Waterways Plan as necessary. The Harbormaster's Office, along with the Waterways Commission, also is responsible for creating, adopting, and periodically revising, a list of priority projects consistent with the Waterways Plan.

C. United States Army Corps of Engineering

A permit from the U.S. Army Corps of Engineers (Corps) would be needed for:

- Work and structures that are located in, under or over any navigable water of the U.S. (defined at 33 CFR 329) that affect the course, location, condition, or capacity of such waters, or the excavating from or depositing of material in such waters - regulated by the Corps under Section 10 of the Rivers and Harbors Act of 1899).
- The discharge of dredged or fill material into waters of the U.S. (defined at 33 CFR 328) - regulated by the Corps under Section 404 of the Clean Water Act.
- The transportation of dredged material for the purpose of disposal in the ocean - regulated by the Corps under Section 103 of the Marine Protection, Research and Sanctuaries Act.

Additional information can be found at the Corps of Engineers New England District website at www.nae.usace.army.mil, go to regulatory/permitting for our regulatory program.

D. Summary Matrix of Roles and Responsibilities

The following matrix summarizes key actions required to implement the Waterways Plan recommendations, identifies those with responsibility in implementing the recommendations, and identifies a time frame within which implementation should be initiated.

	Categories and Recommendations	Required Actions	Responsibilities (Primary Responsibility in Bold)	Time Frame
Land Use Recommendations				
1.	Incorporate Waterway Management Plan recommendations into special permit, variance, and similar reviews	Zoning ordinance amendment	Town Meeting, Waterways Commission to draft refined regulations, Planning Board review	2011

2.	Seek funds and establish process to study measures to protect properties in the FEMA velocity zones	Seek funding sources and initiate studies	Board of Selectmen, Town Manager	ongoing
3.	Establish a sewer outfall removal program	Direction from the Board of Selectmen	Board of Selectmen	ongoing
4.	Request county aid to establish a water quality monitoring program	No change from existing policy and practice	Board of Selectmen	ongoing
5.	Removal of beach debris: Provide additional assignment of maintenance responsibility and funding to the DPW, additional trash receptacles	Work assignments and additional funding	Department of Public Works, Board of Selectmen	ongoing
6.	Removal of beach debris: Increase volunteer activities and increase awareness	Sponsor larger program	Waterways Commission	ongoing
7.	Removal of beach debris: Permitting and licensing criteria	Include as a condition on various permits and approvals	Waterways Commission, Zoning Board of Appeals, Planning Board	ongoing

Water Use Recommendations

1.	Initiate and maintain program of aquaculture improvements	Establish priorities and implement recommendations	Shellfish Warden, Board of Selectmen, Harbormaster's Office, Waterways Commission	Initiated in 2007, ongoing
2.	Undertake mooring system review including allocation of five spaces for emergency and storm-related use	Establish mooring technology, contract for mooring layout plan, establish fee structure and implementation timetable	Harbormaster's Office, Waterways Commission	ongoing

3.	Initiate process for short-term and long-term maintenance dredging	Fund engineering studies, seek resources, implement the plan	Harbormaster's Office, Waterways Commission, Board of Selectman, State and Federal Agencies	ongoing
4.	Secure alternate sources of funds for pump-out facilities	Investigate funding sources and establish plan in advance of the end of the current grant sources	Harbormaster's Office, Waterways Commission, Board of Selectmen, Town Manager	ongoing
5.	Protect water quality and shellfish resource from anchorage and mooring	Mark as off-limits for moorage or anchorage areas requiring protection	Harbormaster's Office	ongoing

Public Facility Recommendations

1.	Undertake the engineering analysis and design of the reconstruction of Scituate Town Pier	Approve funding and initiate process	Commonwealth of Massachusetts, Town Meeting	2011
4.	Establish Right-of-Way Committee	Create mission statement and establish structure	Board of Selectmen	2012
5.	Establish a planning process and pursue funding for this improvement.	Establish study as task for the Waterways Commission.	Waterways Commission	2011

Regulatory Framework for Chapter 91

1.	The Harbormaster, under the authority of the Selectmen, and with the guidance of the Waterways Commission, should provide comments or recommendations to the Planning Board or Zoning Board of Appeals in respect to projects seeking a license or permit from DEP.	Finalize procedural requirements	Town Meeting	2011
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2.	Implement Chapter 91 related processes authorized under this Plan	Identify and finalize procedural requirements	Town Meeting, Planning Board, Zoning Board of Appeals, Board of Selectmen, Harbormaster's Office, Waterways Commission	2011
Long Term Plans				
1.	Continue planning process regarding certain long term opportunities such as major breakwater and dredging programs	Establish this as a regular agenda item of the Waterways Commission	Town Meeting, Board of Selectmen Harbormaster's Office, Waterways Commission	2011+

APPENDIX A

TOWN OF SCITUATE MOORING REGULATIONS & WATERWAYS BYLAWS (Approved June 5, 1979, Most Recently Revised July 2004)

MOORING RULES & REGULATIONS

AUTHORITY

These rules and regulations are adopted by the harbormaster and approved by the Board of Selectmen acting pursuant to the Bylaws of the Town of Scituate, Section 30920, M.G.L. Ch. 102., section 21 et seq., MGL Ch. 91, section 10A, M.G.L. Ch. 43B, section 13 and 310 Code of Massachusetts Regulation 9.07 and any other applicable legal authority.

DEFINITIONS:

- A. Mooring** – Means a place where buoyant vessels, lobster-cars, floats, or rafts are secured to the bottom of a waterbody and the mooring tackle used to secure the vessel by permit from the Harbormaster.
- B. Mooring Space** – Means a space in the harbor in which mooring tackle may be installed and a boat or other float moored upon the issuance of an annual permit by the Harbormaster.
- C. Mooring Tackle** – Means the block, chain, buoy, pennant and any other equipment used to moor a boat, lobster-car, float, or raft.
- D. Commercial (fishing) vessel** – Means any vessel as determined by the Harbormaster principally engaged in fishing and sale of catch.

MOORING ASSIGNMENT PROCEDURE

PURPOSE: The purpose of this procedure is to ensure the fair and equitable assignment of annual permits from a waiting list for the placement and temporary use of bottom anchored moorings, floats, or rafts. This assignment procedure relates to individual commercial and recreational moorings. This procedure is consistent with harbor planning goals. This waiting list procedure shall not discriminate against any citizen on the basis of residency, race, religion, sex, age, disability or other illegal distinction.

A. General

An applicant for a permit for the placement of moorings, floats, or rafts held by bottom-anchor, in vacant or new mooring space in Scituate waterways (as defined in Scituate Bylaws Section 30910) shall complete and file the Town of Scituate Application For Mooring Location and Registration Form with the Harbormaster. The applicant must indicate the boat size range on the application. A one-time application fee of \$15 must accompany the application. These applications must be renewed in person, by mail, or by fax annually between August 1 and December 20 or applicant will lose his/her place on list. Completed applications will be acted on within fifteen days of receipt by the Harbormaster. Placement of the application on the waiting list constitutes action by the Harbormaster.

B. Mooring Assignment Method

The following method will be used for mooring assignment. Commercial (fishing) and recreational vessel waiting lists will be established and managed by the Harbormaster. As new or vacant moorings become available, the Harbormaster will offer the mooring to the next applicant in the appropriate waiting list. Priority will be given to the applicant within a waiting list with the earliest date and time of application and appropriate size range for mooring space available.

- (1) The applicant's position on the waiting list is determined by the date of the initial application. Applications must be renewed in person, by mail, or by fax between August 1 and December 20.
- (2) **Amendment of Application.** Boat size, and other pertinent data on file, can be amended on an Application Form in writing with the applicant retaining priority on the waiting list based on the date of the initial application.
- (3) If an applicant on a waiting list refuses a mooring space offered by the Harbormaster, the applicant remains prioritized on the list based on initial date of application.
- (4) **Request for Upgrading of Existing Mooring.** At any time during the year a mooring permittee may request reassignment based on proposed changes in boat size. The Harbormaster will determine if the proposed vessel can fit on the existing mooring. If not, the permittee's application will be taken for the new boat size and placed on the waiting list based on date and time of submittal. A fee of \$15.00 must accompany the application. The permittee may continue to renew the existing mooring permit with the existing boat on an annual basis until a permit is granted for a new mooring location.
- (5) Newly assigned moorings shall be inspected by the Harbormaster, or his designated agent.
- (6) Failure to renew mooring application will result in applicant being dropped from the waiting list.
- (7) No individual can be assigned a mooring, or a slip in Cole Parkway Marina, unless they are 18 years of age or older.

C. Utilization of Newly Assigned Mooring Permit

- (1) Mooring fee is payable upon acceptance of assignment.
- (2) The permittee's vessel must be placed on the mooring by July 1 of the boating season following the one in which a mooring permit was assigned or the mooring permit will be forfeited. The date for placing the vessel on the mooring may be extended by the Harbormaster, but in no case extended beyond that year's boating season ending November 1.
- (3) The new permittee has the option, but no obligation, to purchase mooring ground tackle from the previous permit holder.
- (4) If the ground tackle is not purchased by the new permittee the previous permittee must remove the ground tackle at his/her own expense. If the ground tackle is not removed within two weeks it will be considered a public nuisance and the Harbormaster may remove it after notice to the previous permittee and at the previous permittee's expense.

MOORING RULES & REGISTRATION

A. All moorings shall be registered with the Harbormaster each year. The registration period for any year shall end at 12:00 noon, May 15th. Any mooring not registered before this time shall be cancelled and the mooring space allocated to those on the waiting list.

(1) An identification sticker bearing the mooring permit number will be issued to each registered mooring holder upon completion of the annual registration fee. This sticker must be attached to the outside of the hull of the boat, aft on the port side, no later than June 1. Failure to display said sticker will result in a penalty as provided in the Bylaws of the Town of Scituate, Section 31000.

(2) Proof of boat excise tax payment must be provided to the Harbormaster prior to annual issuance.

B. A mooring permit is not transferable except to the permit holder's spouse.

C. The payment of a mooring registration fee does not give the permit holder any right, or claim, to any particular location. It does give him/her the right to a location in Scituate waterways and a proof of authorization for a mooring that is suitable for the boat specified on file at the Harbormaster's office.

D. Permittees leaving their moorings for seven or more consecutive days must notify the Harbormaster of their estimated departure and return dates.

E. Without written permission of the Harbormaster, no mooring permit shall be renewed unless the boat owner has regularly moored his/her boat in Scituate Waterways during the previous calendar year.

F. Permittees who register moorings that are lost, non-compliant, and/or are not usable in their present state, shall have their registrations voided and not renewed. Any mooring that is not visible by August 1 shall be considered abandoned, unless recently (1 week) lost, and the space allocated to those on the waiting list.

G. No mooring may be rented for any period of time. No mooring shall be utilized by a boat not registered to that mooring permittee for a period in excess of seven days.

However, that any yacht club or boat club or other non-profit organization having membership of at least fifteen persons may register not more than five moorings for the use of transient guests. These moorings shall be located outside the Federal Project Mooring Areas. Occupancy of such guest mooring for more than seven consecutive days by any one vessel shall be presumptive evidence of violation thereof. Temporary mooring assignments may be made by the Harbormaster from the waiting list for any mooring that is not being used by the permittee with his/her boat on file with the Harbormaster. The owner of the boat on the mooring as of July 1 shall be assessed an excise tax for any year(s) the boat is on the mooring.

H. Any permittee who has not used his/her mooring for a calendar year shall forfeit his/her permit.

MOORING SPECIFICATIONS

A. Each mooring buoy shall be painted white with a horizontal blue stripe around it and marked with the permit holder's owner's name and mooring registration number of sufficient size to be legible from the helm of a Harbormaster patrol boat. In addition, the registered boat length shall be enclosed in a minimum 3" diameter circle.

B. Moorings that are not properly marked as stated above are subject to removal as being illegal. A charge of \$50 will be assessed to the owner for removal regardless if the mooring is returned to its location or not.

C. The length of the mooring pennant on moorings equipped with boxes, or floats attached to the mooring chain shall not exceed ten feet from the box chock to the float, unless express permission from the Harbormaster is granted.

D. All moorings shall have affixed to the chain approximately two feet from the top, a tag permanently marked with the mooring number.

E. Mooring weights and specifications are listed below:

Class of Boat	Min. Weight of Mooring Block	Min. Size Chain Pennant	Max. Length Chain Pennant
(1) to less than 16'	Min. 1000 lb. Granite Block or reinforced with 1" eyebolt	½" Galvanized 1/2" Nylon	15'/15'
(2) 16' to less than 26'	2000 lbs Granite Block with 1 1/4" eyebolt	1/2" Galvanized 5/8" Nylon	25'/15'
(3) 26' to less than 33'	3000 lbs Granite Block with 1 1/4" eyebolt	5/8" Galvanized 3/4" Nylon	25'/20'

(4) 33' to less	4000 lbs.	¾" Galvanized	25'/20'
Than 40'	Granite Block with 1 ¼" eyebolt	¾" Nylon	
(5) 40' and Over	5,000 lbs.	7/8" Galvanized	25'/25'
Granite Block with 1 ¼" eyebolt			

All chains, shackles, eyebolts and all related hardware shall be hot-dipped galvanized. Shackles shall be properly wired to prevent the pin from backing out. With permission of the Harbormaster, a concrete block may be substituted for granite.

* Maximum length may be changed subject to Harbormaster approval.

CARE, MAINTENANCE AND USE

- A. No mooring, after being set shall be moved or in any way be changed without advanced approval of the Harbormaster.
- B. Mooring permit holders are forbidden to change the size of a boat on their mooring without advanced approval of the Harbormaster.
- C. The care, maintenance, and registration of moorings are the responsibility of the permittee.
- D. Winter logs shall be removed by June 1st of each year and replaced by a suitable buoy. The winter logs shall not be replaced before September 15th of each year. Those logs not removed by June 1st shall be considered a menace to navigation and will be removed by the Harbormaster with no addition of a floating buoy. The top two feet of the winter logs shall be painted white and marked with the mooring number.
- E. Commencing July 1, 2004 all moorings shall be inspected on a three-year basis under the direct supervision of the Harbormaster and/or his designated agents up to and including the lifting of the mooring itself, if conditions warrant.
- F. All mooring lifters shall be registered and inspected annually with no fee attached.
- G. All mooring service companies shall be certified annually by the Harbormaster.

PENALTIES

- A. Whoever violates any provisions of these Rules and Regulations shall be penalized as provided in the Bylaws of the Town of Scituate, Section 31000.

Scituate Harbormaster
Scituate Board of Selectmen

Approved June 5, 1979
Revised February 21, 1984

Revised April 1993
Revised June 4, 1997
Revised September 9, 1997
Revised December 16, 1997
Revised May 21, 1998
Revised July 2004

30900 WATERWAYS BYLAWS

30910 DEFINITIONS

In construing this Bylaw the following words shall have the meaning herein given unless a contrary intention clearly appears.

“Scituate Harbor” – the waters between the flashing red light on Cedar Point breakwater and the flag pole at the Scituate Coast Guard building on First Cliff and all the waters inside this line.

“Scituate Waterways” – the waters within the limits of Scituate Harbor and that portion of the North River and South River lying within the town of Scituate and all other waterways within the jurisdiction of the Town of Scituate; as defined in N.O.A.A. map dated February 1979.

“Harbormaster” – shall mean harbormaster and assistant Harbormasters duly appointed by the town administrator.

“Boat” – includes every description of watercraft, other than a seaplane on the water, used or capable of being used as a means of transportation on water.

“Persons” – shall include individuals, corporations, societies, associations and partnerships.

“Skin Divers” – shall include swimmers using fins and/or mask and/or snorkel tubes or self-contained underwater breathing devices.

30920 MOORING PERMITS

A. The purpose of this section is to preserve the public peace, good order and welfare; to preserve and protect the coastal waters within the jurisdiction of the Town of Scituate and all beaches, flats, tidelands and submerged lands lying seaward of the line of mean high water, and to prevent encroachments therein; to promote, preserve and protect the exercise and enjoyment of the public rights of fishing, fowling, and navigation; to so regulate the use of said coastal waters as to protect and promote the public health, safety, convenience and enjoyment thereof.

B. Mooring Permits: No person shall moor any boat or shall place any block, chain, pennant or other mooring device within the limits of Scituate waterways without first obtaining a Mooring Permit from the Harbormaster.

Such permit must be obtained for each calendar year and a mooring fee, set by the Selectmen, shall be paid for said permit to the Harbormaster on a form prescribed by the Selectmen. The application shall set forth the name and address of the owner, the size and type of the boat to be moored, the size and type of mooring, and if the mooring is already in the water, the location thereof with sufficient details to enable the Harbormaster to locate it. No person shall own more

than one mooring. No mooring shall be rented Provided, however, that any yacht club or boat club, or other non-profit organization having a membership of at least fifteen persons may own not more than five moorings for the use of transient guests. Occupancy of such guest mooring for more than seven consecutive days by any one vessel shall be presumptive evidence of violation thereof. The Harbormaster shall not issue mooring permits or slip rentals to persons who have delinquent excise taxes.

C. The Harbormaster shall prepare regulations governing the use of moorings, applications for mooring permits, the size and specifications for moorings, their hardware and pennants. All such regulations shall be submitted to the Selectmen for approval. Upon approval the regulations shall be published once in a newspaper published in the town and shall be posted for seven consecutive days at the Harbormaster's office and at the Town Clerk's office and shall become effective upon expiration of said seven days. Copies of such regulations shall be available upon request at the Town Clerk's office and the Harbormaster's office. Such regulations may be amended from time to time in the same manner.

D. Any hazard to navigation or property, or any mooring placed within the limits of Scituate Waterways in violation of the foregoing provisions may be removed by the Harbormaster at the expense of the owner.

E. As far as practical, the Harbormaster shall require all commercial boats to be moored in a common area.

SECTION 30930 TOWN LANDINGS, PIERS, DECKS, AND FLOATS

A. No person carrying passengers for hire shall embark or disembark such passengers from any boat at the town landings without permission of the Harbormaster.

B. No person shall tie or secure any boat to any town-owned dock, pier or float for more than sixty minutes without first obtaining tie-up permit from the Harbormaster. Such permit may be issued on a daily, seasonal or calendar basis and a tie-up fee, set by the Selectmen, shall be paid to the Harbormaster or other agent authorized by the Town Administrator. The Harbormaster shall prepare regulations governing the use of such town facilities and applications for tie-up permits. All such regulations shall be submitted to the Selectmen for approval subject to procedural requirements of Section 39020C above. Nothing herein shall prohibit the Harbormaster from issuing a tie-up permit for no fee for any disabled vessel or any transient vessel requiring temporary refuge in Scituate Harbor.

C. No person shall clean or scale fish on town float or piers.

D. No person shall leave any boating or fishing equipment or any personal property upon the town landing places, floats, or piers for longer than is reasonably necessary in the act of loading or unloading same, to or from boats or vehicles without written permission of the Harbormaster.

E. No person shall swim or dive from town-owned piers or floats unless enrolled in organizational instruction permitted by the Harbormaster.

F. No major repairs or complete maintenance work shall be done at town piers, docks or floats without permission of the Harbormaster.

G. The town is not responsible for any loss or damage to boats at town piers, docks or floats. Owners will be held responsible for damage to structures and pilings owned by the Town.

H. No boat shall be left in dead storage at the town pier.

SECTION 30940 SPEED LIMIT WITHIN TOWN WATERWAYS

No boat shall exceed a speed of six nautical miles per hour or cause a disturbing wake within the confines of Scituate Harbor, North, South and Gulf Rivers.

SECTION 30950 SKIN DIVING

Skin diving shall be permitted in Scituate Harbor only for the purpose of maintenance of boats, moorings, floats, piers, ground tackle and channel markers, and only with permission of the Harbormaster.

All skin divers shall:

- Display an approved diver's flag.
- Display such a flag on a float or other similar device holding flag upright at a height sufficient to be visible to passing boats, but in any event, not less than three feet.
- Tow the aforesaid float and flag with him while he is submerged in the water and surface thereunder, unless for commercial purposes, permission is granted in writing by the Harbormaster to otherwise display flags for the protection of divers in Scituate Harbor.

No skin diver shall operate in Scituate Harbor and North and South Rivers except from a boat and attended by another person.

SECTION 30960 WATERSKIING

No person shall operate a boat in Scituate Harbor while towing water skiers, aquaplanes or other similar devices except in connection with water carnivals and exhibitions authorized by the Selectmen, or in an area designated by the Selectmen. No person shall operate such boat or equipment within 150 feet of any swimmer or at any of the beaches of Scituate.

SECTION 30970 DISCHARGING

Discharging or depositing, or causing to be thrown overboard, oil, refuse, waste, treated or untreated sewerage into the harbor, waterways or marinas is prohibited. All marinas will display this regulation on their wharf or ramp so as to be in the uninterrupted view of persons using this facility and to be of size to be read at a reasonable distance.

SECTION 30980 SAILING CLASSES

Sailing classes will be allowed to race within the Scituate Harbor area when under the jurisdiction of an authorized race committee recognized by the Harbormaster. Such boats shall not have courses laid out which use government marks for turning buoys or use fairways as a leg

of the race course. Such boats shall respect the maneuvering problems of larger vessels in the harbor.

SECTION 30990 TOWN LAUNCHING RAMPS

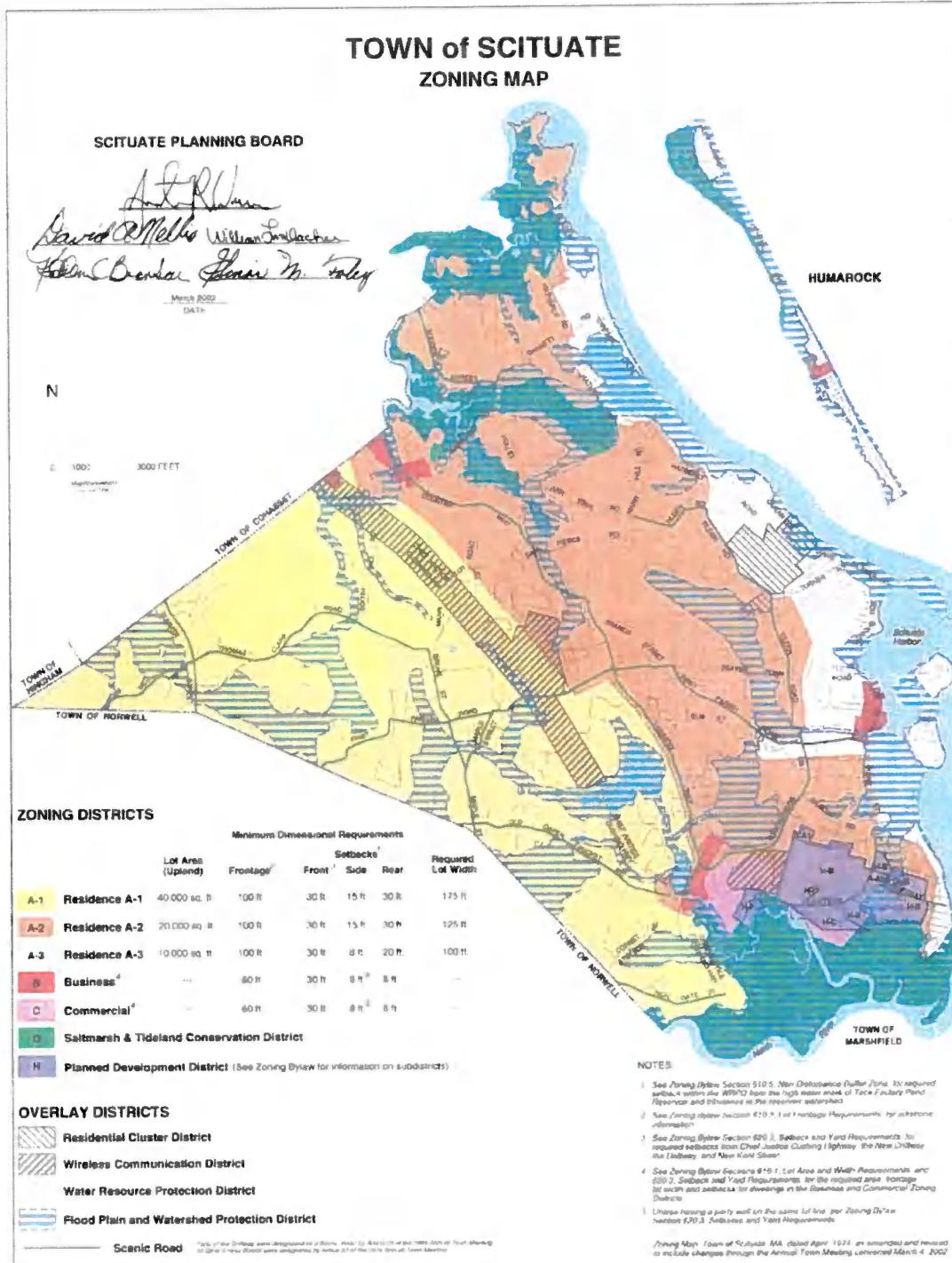
The proper usage of the town launching ramps shall be determined by the Selectmen. This shall include the proper parking of trailers and motor vehicles at the approach to the ramp. Persons using town ramps for hauling of larger boats requiring cradles shall apply to the Harbormaster for permission. Such cradles and/or boats shall not remain on the town ramps for more than one tide.

SECTION 31000 PENALITIES

Whoever violates any provision of this chapter or any rule or regulation adopted under 30920C. hereof, and whoever fails to obey the lawful and reasonable orders of the Harbormaster, or resists him in the execution of his duties shall be fined up to \$100.00 and/or may have their mooring, dockage, or commercial access privileges revoked. This chapter shall be enforced by the Harbormaster.

APPENDIX B

Town of Scituate Zoning Map



APPENDIX C

SCITUATE SHELLFISH REGULATIONS

REVISED SHELLFISH REGULATIONS

January 10, 1995

These regulations are made by the Selectmen under authority of a vote of the inhabitants of the Town of Scituate while acting on Article 14 of the Warrant for the regular Town Meeting held on March 4, 1957, and shall continue in force until altered, amended, rescinded, or repealed by the Selectmen or until their authority to make and enforce shellfish regulations has been repealed.

DEFINITIONS: In regard to these regulations, unless the context otherwise requires, the following words shall have the following meanings:

SHELLFISH - clams, conchs, mussels, oysters, periwinkles, quahogs, razor clams or razor fish, scallops, sea clams, sea scallops and winkles.

SHELLFISH OFFICER - any person who has been specifically appointed and sworn to enforce the shellfish regulations of the Town of Scituate. Additionally, all police officers of the Town of Scituate shall have the authority of a "SHELLFISH OFFICER."

REGULATIONS:

1. Permits are required for the taking of shellfish and sea worms from the tidal areas and coastal waters of the Town of Scituate, Massachusetts.
2. The holder of a permit is hereby authorized to take shellfish and/or sea worms from the open areas in the coastal waters of the Town of Scituate, for consumption by his own family, or for his own use as bait, subject to the provisions of Chapter 130 of the General Laws, as amended, and subject also to any regulation which may be made by the Selectmen under (and in accordance with) the provisions of said Chapter 130.
3. Permits are required for any person 16 years of age or older who desires to take shellfish. Persons under 16 years of age may ONLY take shellfish if they have in their possession the permit of their parent or guardian. Any resident 65 years of age or older shall be issued a permit free upon application. Presenting and/or allowing false information to be included on the permit shall be considered a violation.
4. The taking of shellfish shall be permitted on ONLY Thursday and/or Sunday.
5. All recreational shellfish permits shall expire one year from the date of issue, unless sooner revoked.
6. The Selectmen of the Town of Scituate shall determine and set the rates for the shellfish permit.
7. Any person, while taking shellfish and/or sea worms, must carry and display a valid shellfish permit in a visible manner on his outer clothing.
8. Any person who is taking or has taken shellfish from tidal areas or coastal waters of the Town of Scituate must show a permit upon request or demand of a Shellfish Officer, or any other officer authorized to enforce the laws relating to marine fish and fisheries.
9. Any person taking shellfish and/or sea worms shall land at any place designed by a Shellfish Officer at any time to allow him inspection of permit and take.

10. No shellfish or sea worms shall be taken from areas which the Selectmen may, from time to time, designate as closed areas.

11. The legitimate user or users of a valid permit is/are limited, in total, to taking not more than one-fourth of a bushel (8 quarts) of soft shelled clams (steamers) or quahogs in any one week. The week shall be the seven-day period from Monday through Sunday, inclusive.

12. Shellfish may be taken only between sunrise and sunset.

13. Shovels, hoes and rakes are strictly prohibited in taking soft-shell clams. The conventional clam digger ONLY may be used. Any other contrivance is strictly prohibited.

14. All clams taken must be legal length, 2 inches or more.

15. A person taking shellfish shall be required to cover over all undamaged shellfish and refill all holes.

16. The penalty for violation of any of the above-listed regulations shall be a fine of not less than twenty (\$20.00) nor more than two hundred fifty (\$250.00) dollars for each offense and/or the suspension or revocation of the offender's permit and the seizure of all shellfish at the discretion of a Shellfish Officer.

ENACTMENT: These regulations were established by a vote of the Selectmen on the 11th day of October, 1994, and shall be in effect as of October 1, 1994 and shall supersede all previous regulations.

REVISED: JANUARY 10, 1995

BOARD OF SELECTMEN

Last modified May 13, 2005

APPENDIX D

Table: Water Quality Criteria

Item	Water Quality Criteria
Dissolved Oxygen	Not less than 6.0 mg/l at unless background conditions are lower.
Temperature	Not to exceed 85 F (29.4 C) with daily mean of 80 F (26.7 C). Rise in temperature due to discharge not to exceed 1.5 F (0.8 C)
pH	6.5 to 8.5 standard units.
Fecal Coliform	In waters approved for shellfishing: not to exceed MPN* 14 col./100 ml; 10% of samples not to exceed a MPN of 43 col./100ml. In waters not designated for shellfishing: not to exceed 200 organisms in any representative set of samples; 10% of samples not to exceed 400 col./100ml.
Fecal Coliform (contd.)	
Solids	Waters must be kept free from floating, suspended, settleable solids in concentrations or combinations that would impair any assigned use to this class, that would cause aesthetically objectionable conditions or that would impair the benthic biota or degrade the chemical composition of the bottom.
Color and Turbidity	Waters must be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class of waters.
Total phosphate	Not to exceed an average of 0.07 mg/l as P during any monthly sampling period.
Ammonia	Not to exceed an average of 0.2 mg/l as nitrogen during any monthly sampling period.
Taste and Odor	Non allowable

APPENDIX E

TOWN OF SCITUATE PLANNING MAP AREA



APPENDIX F

MAP OF HISTORIC HIGH WATER MARK OF 1848



APPENDIX G

SUMMARY OF SOURCES AND ADDITIONAL AVAILABLE INFORMATION

Sources

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Jill Buckley

From: Lynn Bogle <lyn niboggle@gmail.com>
Sent: Tuesday, May 20, 2014 6:04 PM
To: Generic Harbormaster
Subject: William Iaconelli Mooring payment for 2013 & 2014

Hello Harbormaster,

Check #1965 from William Iaconelli was mailed March 25th for full payment of \$132 for the 2013 Mooring Fee. With the check was a note stating that he will not use the Mooring for 2014, as his boat is being sold. Please re-check your records regarding the payment made March 25th.

Thank you,
Lynn Iaconelli Bogle

